Foreword

The role of information in our societies has never been greater. It is an enabler, a raw material, a source of innovation and creativity. To give everyone access to it is to ensure that everyone has the opportunity to learn, grow, and take better decisions for themselves and for those around them.

In an information age, this is a necessity. Those who lack access are left behind, deprived of a key means of improving their own situation, cut off from cultural, economic, social and civic life.

This is why I am so convinced of the power of libraries as motors of change. They are guarantors of this access, not only through the physical possibility to find a book or get online, but by providing the space and support to ensure that everyone can realise the potential of information.

I believe strongly that even as more and more of our lives take place online, libraries have become more vital – as physical meeting points, as places to ask for advice, as institutions with a clear vocation to help their communities.

Through their work, we can ensure that information becomes a force for equality, and an accelerator of development both around the world and across different policy areas.

I therefore very much welcome this second edition of the Development and Access to Information report. I am grateful to all of our authors – in particular our guest authors – for their contributions. I hope that their work will contribute to greater recognition of, and support for, the access to information for all that can make for better lives.
Introduction

Access to information is essential for the empowerment of individuals, the effectiveness of policies, and the accountability of governments. When everyone can enjoy it, it is a driver of sustainable development across all of its dimensions. When it is absent, insufficient or unequal, opportunities are missed, decisions are poorer, and progress is stifled. Libraries are vital in ensuring that everyone can benefit from access to information, making stronger, fairer societies a reality for all.

This report – the second in the series following the first edition in 2017 – provides further evidence, examples and analysis of this contribution, and of the role of libraries in achieving it. It is explicitly focused on the United Nations 2030 Agenda and its Sustainable Development Goals (SDGs), which provide both an affirmation of the importance of access to information for development, and a framework for thinking about how to realise its potential.

The goal of this report is to provide an exploration of access to information as a driver of development. In doing so, it seeks to inform decision-making about the implementation of the SDGs. It is designed to be applicable at all levels about how best to build stronger, fairer, more sustainable societies, from the discussions taking place at the UN High Level Political Forum to those at the national and local level. It is therefore intended for policymakers and advisers, as well as anyone who is seeking more effective ways to support development, and the librarians and library workers who can help deliver it.

This introduction therefore offers a refresher on the understanding of access to information applied in this report, a discussion of key issues emerging since the last edition, and an overview of the chapters that follow.

Meaningful access to information and the role of libraries

When referring to access to information, this report takes a deliberately broad approach, underlining the importance of “meaningful” access. This reflects an understanding that the physical and legal availability of information – the supply side – cannot make a difference when people do not have the skills, confidence and social and cultural conditions to apply it – the demand side.

In other words, a physical internet connection, or laws that ensure transparency of public data or open access to publicly funded research, can only have their full effect if everyone is able to use this information fully.

This is an approach that finds its roots in the United Nations 2030 Agenda. The Agenda makes reference to access to information, more or less explicitly, in 20 targets, including commitments to develop infrastructure, promote skills, tackle inequalities and promote freedoms.

A key part of this report is therefore based on a basket of indicators that explore these four facets, or “pillars,” of access to information: physical internet connectivity, skills, social and cultural context, and laws. These pillars are explained in more detail in Chapter 1, but in short illustrate the conditions that need to be met to allow for the potential of access to information to be realised.

In a situation where all the pieces are in place, anyone can get online, without undue practical, financial or cultural barriers. They can find a full range of undistorted information, and have the ability to take this, evaluate it, and apply it in order to improve their own life or the lives of those around them.

Where even one element is missing, this cannot be the case. Without an internet connection, there is less opportunity to learn, to communicate, and to create. Without favourable social and cultural conditions, whole groups can be excluded – in particular women, but also those affected by poverty or who have a lower legal status (such as refugees). Without the right laws, the content available online is skewed, and people are unable to create their own materials or share their opinions. And without skills, information cannot be found or applied effectively.

A failure to guarantee meaningful access to information hurts the individual, first and foremost. They miss out on information that can help them make better decisions, or on opportunities to learn and communicate.

However, it also brings costs in terms of reduced policy effectiveness. If a population is not informed about development schemes and programmes, cannot understand or engage with public health information, or cannot engage with online public services, government is less able to reach its goals. Those who govern also rely on good access to information to guide their own policy-making, while their accountability to people and parliaments requires access in order to work.

The inability to find, understand, use and create information can therefore lead to a variety of negative outcomes. In contrast, those individuals and societies that can access and make use of information are in a much stronger position to succeed now and into the future. In order to avoid different levels of meaningful access to information leading to sustained or widening development divides, there is a need for intervention.

In policy terms, governments can act to improve their scores on each of the indicators identified in this report, through reforms favouring connectivity, equality, education and fundamental freedoms.
As part of this, supporting effective library systems can be a uniquely powerful step. Connected libraries can provide a stepping stone toward, and complement to, widespread home internet connections. They can work alongside schools as providers of skills, from basic literacy to higher critical thinking, and represent a gateway to lifelong learning opportunities. They are open to all, and so provide a place where social and cultural barriers can be overcome, and where individuals can start to engage in civic life.

Developments since 2017

It is worth reflecting on the changes we have seen in the information landscape since the first report in July 2017. Clearly, two years is a relatively short period of time. However, three changes seem particularly relevant in the context of a report focusing on access to information.

A first issue concerns the rate of progress in connecting people to the internet. While there is general consensus that over 50 percent of internet connectivity was achieved in 2018, this still leaves much to do. Moreover, the rate of increase of connections appears to be falling, meaning that it risks being many decades before everyone who wants to access information through the internet can do so.

This is a major worry, given that even if internet connectivity is not a sufficient condition for meaningful access to information, it is a necessary one. Connections are also essential for libraries to deliver many of the services through which they contribute to development. New approaches, and full use of existing infrastructures, are essential.

A second question relates to the emergence of deliberate misinformation as a political issue. This has had significant implications for confidence in information found on the internet, and has led to calls for greater government intervention.

More positively, this phenomenon has also underlined the need to develop greater skills in using the internet. These can help people not only understand and evaluate the information they find, but also apply, share and create it. There is, arguably, a greater understanding of the need to build the knowledge, capabilities and attitudes to be effective internet users than ever before.

Linked to the second question is that of content regulation in general. The power of the internet as a means of sharing and accessing information has encouraged efforts to control it, for political, security or social ends. The emergence of new tools such as filtering technologies makes this a more feasible prospect than might have been the case in the past.

As such, we have seen calls – including sometimes from major platforms themselves – for regulation. Beyond the risk of simply consolidating the position of major players as the only actors who can apply new rules, disproportionate regulations pose a threat to the free expression and access to information that have made the internet such a driver of change.

The second edition

As the second edition of the Development and Access to Information report, this publication provides further evidence of the contribution of access to development. It places a particular emphasis on the place of libraries in achieving this.

For the first time, however, it provides some insights over time, based on the basket of indicators of access to information identified above.

Chapter 1 explores these evolutions, highlighting concern that growth in the number of individuals using the internet is too often not being matched by progress in education, gender equality and freedoms.

Chapter 2 takes the library perspective, drawing on a range of new examples of where libraries are making the difference. It underlines in particular the multiple benefits of many library activities, which can lead to positive results in a variety of fields. Frequently, these examples show what can be achieved when an internet connection is paired with additional initiatives.

Chapters 3 to 7 focus, in turn, on five of the Sustainable Development Goals that are in focus in 2019 – SDG 4 (education), SDG 8 (decent work and economic growth), SDG 10 (reducing inequalities), SDG 13 (climate action) and SDG 16 (peace, justice and strong institutions). Each explores the information-related aspects of a Goal and its associated targets, setting out how these contribute both to the effectiveness of policies and the achievement of results. In each case, the ways in which libraries can help are explained. A conclusion then brings together some of the lessons learned from the different chapters.

Together, these perspectives offer a clear message. Meaningful access to information is a powerful development accelerator, and in providing this, libraries are essential partners for development. We call on governments and all those involved in sustainable development policy-making to help them realise their potential.

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2. See for example: https://news.itu.int/itu-statistics-leaving-no-one-offline/
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Chapter 1
Progress toward meaningful A2I, and emerging threats

This chapter provides an overview of the progress various countries have made toward achieving meaningful access to information between 2015 and 2018, in the context of the United Nations (UN) 2030 Agenda and the Sustainable Development Goals (SDGs). The baseline year, 2015, was chosen to correspond with the year the SDGs were established by the UN General Assembly.¹

Throughout this report, meaningful access to information is defined as “the rights and capabilities to use, create, and share information in ways that are meaningful to each individual, community, or organisation.”² This rights-based approach recognises how a combination of structural factors at the social, political, and economic levels manifest in local and global contexts to advance (or impede) the ability of meaningful access to information to contribute to more equitable and sustainable development.³

Why we measure progress on meaningful access to information
The UN 2030 Agenda “is a plan of action for people, planet and prosperity” with the pledge that “no one will be left behind.”⁴ Meaningful access to information can advance the types of progress envisioned across the 17 Goals included in the Agenda.

The rise of the internet and the social web have profoundly expanded the range of possible interactions between individuals, communities, organisations, and governments, providing growing opportunities to collaborate to combat poverty and inequality, produce and consume civic information, and participate in social and political action.⁵ Yet there is no guarantee that access to information and communication technologies (ICTs), or the opportunities they enable, will lead to equitable or inclusive social change. This is particularly true when considering the enabling conditions required for information access to address key societal challenges meaningfully – as outlined in the Development and Access to Information Framework:⁶ (1) the availability of physical connectivity infrastructure, (2) the capabilities to use ICTs, (3) the social context of information, and (4) the legal and political environment. Indeed, given the barriers many of the world’s most vulnerable and isolated populations continue to face in these areas, it is very possible that an inequitable distribution of information access will contribute to types of marginalisation that hinder development efforts.

Here are some of the reasons we measure progress:
Meaningful access to information enables bottom-up change that supports a broad range of the sustainable development goals as enshrined in the UN 2030 Agenda.

There is extensive evidence on how information and communication technologies, and the social dynamics they engender, have been leveraged to promote sustainable development in highly diverse contexts and across a wide variety of domains, such as workforce development, gender equality, social justice, and economic growth. In 2019, the High-
Level Political Forum on Sustainable Development (HLPF) will focus its annual thematic reviews on SDGs related to education, employment, inequality, and good governance, so these domains are of particular interest in this chapter.

**Meaningful access to information must be made more equitable and inclusive.**

In a world increasingly driven by interconnectedness and ubiquitous communication, meaningful access to information is a necessity and a right. In the past two decades, we have made great strides toward increasing connectivity and digital literacy for billions of people. Yet for many communities around the world, progress has been thwarted by foundational social and economic inequalities that remain in place. We are still far from achieving a truly inclusive and equitable information society.

**Technological advances will increasingly affect the progress of the SDGs, not only in terms of how people access and use information, but also the social, cultural, and political ramifications of related issues that emerge.**

In today’s evolving complex information ecosystem, achieving equitable, meaningful access to information is more important than ever. Emerging challenges such as disinformation, online security and data privacy, the monopolisation of information access and curation, and new restrictions on freedom of information further exacerbate deeply rooted social and economic inequalities, which impede progress across multiple fronts.

**How we measure progress on meaningful access to information**

To monitor the progress toward meaningful access to information, we selected 17 indicators across the four dimensions of the Development and Access to Information Framework. This framework was developed by the authors in 2017 and reflects a general consensus among researchers, development practitioners, and informed policymakers that physical access to information technology on its own is not sufficient to establish a more equitable and participatory society. The social, political, and cultural context of information creation and use is critical for unlocking the transformational nature of information resources and improving the well-being of people and their communities.

Measuring the contribution of meaningful access to information to sustainable development is a complex endeavour, determined in part by the availability of data across countries from year to year. Summarising the data also presents challenges; for instance, we group countries by region or income level to highlight trends, yet doing so can mask differences between countries within a region. Regional classifications reflect those used in the Sustainable Development Goals Report 2016. Under this system, countries are divided into 10 distinct regions – nine geographic regions and one economic region, which is a group of 55 “developed” countries (out of 228 countries total). Income classifications apply four income categories established by the World Bank: low, lower-middle, upper-middle, and high. For a more comprehensive view of the progress toward meaningful access to information at a country level, we encourage readers to utilise other tools related to the DACI initiative, including the DACI Dashboards and IFLA’s Library Map of the World and its SDG Stories (a monitoring tool that provides case studies of how libraries are advancing the SDGs with their work).

**Looking ahead**

This chapter is divided into three sections, with each corresponding to a dimension of the aforementioned Development and Access to Information Framework.

- Section 1 – Connectivity Infrastructure and Use – shows the strides the world has made toward establishing more inclusive connectivity infrastructure, as evidenced by expanded mobile broadband network coverage and a growing proportion of internet users.
- Section 2 – The Social Context of Adoption and Use – shows how educational attainment for youth has changed in recent years, including an upward trend in completion of upper secondary education and an ongoing decrease in the gender gap between men and women across four educational levels.
- Section 3 – The Legal and Policy Environment – shows how online and offline freedoms are declining in many countries.

### 1. Connectivity infrastructure and use

In the context of the SDGs, physical connectivity infrastructure (specifically for mobile and landline internet) plays a substantial role in supporting economic inclusion and providing a route to a more equitable distribution of knowledge and resources. For this dimension, we include indicators in two connectivity areas: 1) Availability and reach of the technical infrastructure; and 2) Use of that infrastructure. The indicators used (and their sources) include:

1. Population covered by at least a 3G mobile network (ITU)
2. Percentage of households with internet access (ITU)
3. Active mobile broadband subscriptions per 100 inhabitants (ITU)
4. Fixed broadband subscriptions per 100 inhabitants (ITU)
5. Percentage of individuals using the internet (ITU)

Looking at the changes in connectivity from 2015 to 2016, we see a clear pattern of improved connectivity across all regions, and on nearly every indicator, continuing a trend of sustained growth. Lower-middle-income and low-income countries achieved some of the most significant progress.

#### 1.1 Coverage of 3G wireless networks reached 82% of the world’s population

Between 2015 and 2016, the coverage of 3G wireless networks expanded to reach almost 82% of the population in the world, or more than 6 billion people. At a regional level, Southeastern Asia, Northern Africa, the Caucasus and Central Asia, Southern Asia, and Sub-Saharan Africa showed the greatest progress in terms of coverage. Although low-income countries reached nearly 50% 3G coverage (by population) in 2016, they still lagged far behind the world average. At a country level, connectivity infrastructure in Bolivia, Ukraine, Greenland, Sierra Leone, from and Nepal showed the highest percentage increase of 3G network coverage in 2016 compared with 2015.

#### 1.2 Almost half of households worldwide have access to the internet

The number of households with internet access at home through fixed or mobile networks increased from 45% (2015) to 48% (2016) worldwide. Despite this modest improvement, there are very significant differences across the regions. While in Latin America and the Caribbean 46% of the population had home internet access, in Sub-Saharan Africa and Oceania only 16% and 14%, respectively, had this connectivity resource in place. According to the ITU (2018), the increase in households with internet access may be partly driven by an increase in the use of mobile devices for accessing the internet at home rather than by any change in fixed broadband connections. While indicators on home internet access, mobile-broadband subscriptions, and 3G coverage increased from 2015 to 2016, fixed broadband showed a negligible drop (0.3 percentage point) in the number of subscriptions. A possible explanation for the larger increase in mobile broadband than fixed broadband subscriptions may be that fixed broadband continues to be relatively expensive in low-income countries, where, as the Broadband Commission has found, fixed broadband costs more than twice as much as mobile broadband on average.
1.3 More than half of the population in the world is using the internet. Compared with other indicators on connectivity infrastructure, internet use showed the most dramatic change, going from 47.1% (2015) to 51.6% (2016) of the population, a 9.6% increase. Between 2015 and 2016, the highest percentage increase of internet users was in low-income (34.9%) and lower-middle-income (11.2%) countries. At a regional level, Oceania, Southeastern Asia, and Southern Asia experienced the highest percentage increase of internet users compared to 2015. Although many of the countries in these regions are still below the world average, they continue to make positive strides toward universal physical access to information in some of the most economically challenged areas worldwide. (See Figure 1: Regional progress in connectivity infrastructure and use from 2015–2016. At a country level, nine out of the 10 countries that experienced the largest growth in the internet-using population are in Sub-Saharan Africa. Of these nine countries, Sierra Leone, Tanzania, Guinea, Gabon, and Mozambique saw the largest increase in individuals using the internet compared with the previous year. Gabon, for example, increased the share of its population using the internet from 7% in 2010 to almost 50% in 2016. According to the World Bank (2018), through a combination of investments in broadband infrastructure and the design of a digital strategy that established a regulatory environment more conducive to innovation and competition in the country, the cost of internet access in Gabon has fallen from an average of US$18 to US$2.80 per month.17

Figure 1: Regional progress in connectivity infrastructure and use from 2015 to 2016 (percent of the population)

Source: ITU Technology & Social Change Group, University of Washington

1.4 The percentage of internet users has steadily increased, but challenges related to gender disparities and internet affordability still remain. The gender internet gap increased from 11% in 2015 to 12% in 2016. When aiming for truly inclusive and equitable participation, it is important to look at connectivity in relation to different populations, especially historically excluded groups such as women and girls. Research has shown women and girls frequently face particularly difficult challenges related to social and cultural norms that make them less likely than men and boys to access, use, own, and create digital technology and further develop their digital skills.18 For example, a recently published comprehensive study on the state of gender equality in ICT access, skills, and leadership challenged the commonly held assumption that high levels of mobile phone adoption had shrunk the digital gender gap. It showed, rather, that the gap persists across all three domains in several countries,19 and this situation is further exacerbated for women living in rural areas.20

According to the ITU (2016), the proportion of men using the internet continues to be higher than the proportion of women in two-thirds of countries where data is available, yet it is unclear to what extent the situation has improved in recent years. ITU estimates indicate a growing divide over a one-year period, with the internet gender gap increasing from 11% in 2015 to 12% in 2016 (ITU, 2016). At a regional level, ITU estimates showed that the gender gap was largest in Africa (23%), and the Arab States (18%) and smallest in the Americas (2%) for the reporting countries.21

Affordability is an important determinant of people’s access to information. Analysis by the Alliance for Affordable Internet (A4AI) suggests considerable progress in the past 10 years on issues related to internet affordability, especially with price reductions for mobile services.22 Yet the inability of people to afford a basic internet connection remains one of the biggest barriers to access.23 A4AI defines affordability as 1% of the average person’s monthly income, calculated based on GNI per capita.24 A4AI’s latest report shows that in 2017 more than 2 billion people around the world still lived in countries where mobile data was unaffordable. A4AI found considerable price differences across regions. For instance, mobile data was the most affordable in Asia (1.54% of income) versus, for example, Latin America and the Caribbean (3.56% of income) and Africa (8.76% of income). Only four African countries met the affordability target (Tunisia, Nigeria, Mauritius, and Egypt).25

2. The social context of adoption and use: educational opportunities for youth

Whereas physical connectivity infrastructure provides communities with the technological foundations for information access, the social context of adoption and use shapes how individuals engage with infrastructure. A multiplicity of factors – including social dynamics around poverty, race, ethnicity, gender inequality, and a variety of social and cultural norms – influence people’s ability to access and use information meaningfully in their everyday lives. In many countries in the world, young people experience higher levels of poverty, unemployment, underemployment, and overall marginalisation than older adults,26 justifying the UN 2030 Agenda’s targetting of youth in SDGs 4 (education for all) and 8 (decent employment). The following analysis focuses on youth to illustrate how the social context affects meaningful access to information. Specifically, we consider educational attainment and its effect on opportunities for youth.

Education is key to improving the livelihood of individuals, families, and communities, and it is a critical vehicle through which children and youth can feasibly aspire to improve their livelihoods. Yet education can manifest the inequities that exist in many countries, hampering the prospects of young people.

Meaningful access to information is closely intertwined with education. Clearly the possibility to connect to the internet can open up exciting new possibilities to access materials and tools for learning. However – crucially – the relationship also runs in the other direction, with a range of skills, from basic literacy to higher order critical information literacy necessary in order to make optimal use of access to information.

In this way, we see that some youth – those with the skills to use technology and information in a meaningful way – may find resources and opportunities online to supplement their livelihoods or job prospects, while others miss out. Physical connectivity alone cannot overcome the barriers imposed to meaningful access to information if opportunities...
for education and training, do not exist or are only available to the few.

For this report, our analysis draws on data from one indicator:

1. Educational attainment, i.e., the highest level of education obtained by individuals aged 25 years and above – secondary school and college (UNESCO)

Overall, looking at the changes in the social context from 2006 to 2015, we see an upward trend in completion of upper secondary education for the reporting countries, and are closer to achieving gender parity in primary and lower secondary education, with the share of women obtaining a bachelor’s degree actually surpassing that of men.

2.1 Completion of upper secondary education for individuals 25 years and above increased to 34% worldwide

Measures of educational attainment – the highest level of education an individual has completed – provide a picture of the opportunities children and youth have to progress along the education pathway. Our analysis shows an increased upward trend in attainment of upper secondary education at a world level. Between 2006 and 2015 (the latest year with available data), the educational attainment rates for upper secondary education as the highest level obtained increased from 29.5% to 34.4%. Meanwhile, levels of attainment of lower secondary education as the highest level obtained slightly fluctuated from 15.6% to 16.9%. Attainment of a bachelor’s degree as the highest level obtained, however, decreased from 17.8% in 2011 to 14.2% in 2015. (See Figure 2: Trends in educational attainment by level of education, 2010-2015.)

Studies show that national income levels are directly correlated with the level of educational attainment and recent trends show positive progress, particularly in low-middle-income countries. From 2014 to 2015, the highest level of educational attainment for low-middle-income countries increased both when it came to the upper secondary level (from 22% to 36%) and at the bachelor’s level (from 9% to 14%).

At a regional level, countries in Sub-Saharan Africa made the most significant progress in increasing educational attainment rates at the upper secondary level between 2014 and 2015 (from 12% to 26%). The share of people obtaining a bachelor’s degree as the highest level of educational attainment in the region dropped from 5% to 3% over the same period. Bachelor’s degree attainment also decreased from 17% to 11% in Western Asia but grew slightly from 2014 to 2015 in the Caucasus and Central Asia, “developed” regions, Eastern Asia, Latin America and the Caribbean, and Southeastern Asia. However, looking at “developed” countries over a two-year period shows a downward trend in bachelor’s degree attainment from 20% in 2013 to 15% in 2015.

3. The legal and policy environment: political rights, civil rights, and freedom on the net

The legal and policy environment pillar of the DA2I Framework relates to the extent to which countries have implemented the kinds of rights-based goals and equitable and participatory practices that support meaningful access to information. This includes guaranteeing the rights of people to freedom of expression, association, political participation, civic action, and online privacy and safety.

The relationship between freedoms and information access is enshrined in the Universal Declaration of Human Rights and Goal 16 of the SDGs, and particularly Target 16.10, which seeks to “ensure public access to information and protect fundamental freedoms, in accordance with national legislation and international agreements.”

When these freedoms are restricted, people are unable to make full use of access to information, not only to participate in civic life, but also to...
communicate and create relevant content for the benefit of others. Such strict controls can have a chilling effect on journalism, research, and readiness to seek personal information.

This section presents the state of the world as it relates to political rights, civil liberties, and online freedoms. It relies on indices from Freedom House, whose comprehensive data collection efforts evaluate the state of the world (and trends over time) on a range of issues, including the right to information.\(^{31}\)

The two indices used are:

1. Freedom in the World
2. Freedom on the Net.

### 3.1 Freedom in the world continues to decline

Freedom House's Freedom in the World index is composed of two separate ratings on political rights and civil liberties.

- **Political Rights Rating:** Assesses people’s ability to participate in the electoral process, ensure political pluralism, and hold government accountable.
- **Civil Liberties Rating:** Assesses the extent to which people can exercise freedom of expression and belief, whether they can freely associate and assemble, and whether there exists an equitable rule of law that protects social and economic freedoms.

The combined Freedom in the World index paints a bleak picture of the state of the world regarding the right to information for all people, with glaring implications for the future of democracy. According to Freedom House,\(^{32}\) 2018 marks the 12th consecutive year with falling ratings in political rights and civil liberties around the world. Today, almost 40% of people in the world live in countries that are rated as not free and a quarter live in countries that are rated only partially free.\(^{33}\)

Our analysis shows that between 2010 and 2018, freedom declined across most regions in the world and almost all country income levels. Between 2017 and 2018, high-income and upper-middle-income countries experienced the greatest declines in their combined freedom score – including mature democracies where many might expect freedoms would not falter. At a regional level, of the 10 UN subregions, only three (Eastern Asia, the Caucasus and Central Asia, and Oceania) experienced an increase in freedom in the past two years, and yet even these slight regional increases were driven by just a handful of countries, and almost all of the countries within these regions remain partially free or not free.\(^{34}\)

Countries experiencing improvements in political rights and civil liberties often saw only minor improvements in their scores, although several countries – such as in Angola, Ethiopia, and Ecuador\(^{35}\) – had significantly improved scores due to major developments that resulted in expansions of freedoms. (See Figure 4 for the countries that experienced the biggest gains and losses in freedom in 2018.)

### 3.2 Freedom in the world: political rights and civil liberties

Looking at the different components that make up the Freedom House political rights and civil liberties sub-indices, we see that in Western Asia and the Caucasus and Central Asia, authoritarian regimes further limited the ability of people to have fair and free elections.\(^{36}\) (See Figure 5: Regional declines and gains in civil liberties and political rights, 2017-2018. In 2018, compared with the previous year and relative to other regions, Northern Africa experienced the largest declines in multiple areas, including: rights of association and organisation; guarantees of people’s autonomy and individual rights; political pluralism and a proper functioning of government by implementing safeguards against corruption and cronyism; and openness and transparency in government.

Although the root cause of this decrease in freedoms varies by region and country, some emerging trends have affected countries across different levels of social, economic, and political development. Perhaps the most worrisome trend is the rise of authoritarianism and populist governments in many countries in the world, including in states with a long and established democratic tradition.\(^{37}\) Fuelled by increasing social and economic inequality, people’s overall distrust of a political system they deem corrupt and inefficient, along with the current wave of disinformation and manipulation of information in social media, is setting the ground for authoritarian forces to gain political power at the expense of our political rights and civil liberties.\(^{38}\)
### 3.3 Freedom on the Net

The Freedom on the Net rating tracks obstacles to internet access, limits on internet content and violations of user rights in 65 countries. According to the latest Freedom House Freedom on the Net report (2018), 34% of the world’s population lived in countries rated as "not free" and 33% in countries rated as "partly free." Only 20% of people lived in countries where their rights online were guaranteed.39

Our freedoms online had already been declining for seven consecutive years, and in 2018, this trend continued for an eighth year. According to the latest Freedom on the Net report:

- Of the 65 countries assessed, 26 have been on an overall decline since June 2017, compared with 19 that registered net improvements. [Overall], 17 governments approved or proposed laws restricting online media in the name of fighting “fake news” and online manipulation, and 18 countries increased surveillance, often eschewing independent oversight and weakening encryption to gain unfettered access to data. (Freedom House, FON 2018)

Our analysis suggests that low-income countries suffered the biggest losses in online freedoms from 2015 to 2016, followed by upper-middle-income countries. Countries in Northern Africa and the Caucasus/Central Asia experienced the greatest decrease in online freedoms in 2016. The Philippines, Turkey, and Saudi Arabia were among 30 countries where governments attempted to manipulate political and civic dialogue and spread disinformation by employing armies of “opinion shapers” to promote certain political agendas and curtail opposition on social media.40 China, Iran, Syria, Ethiopia, Saudi Arabia, Bahrain, Pakistan, Cuba, Uzbekistan, and Vietnam were the 10 countries with the most restrictions on online freedoms in the world in 2016.

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#### Source: Freedom House
Technology & Social Change Group, University of Washington.
The road ahead

As we look at the progress regions and countries made toward achieving meaningful access to and use of information between 2015 and 2018, we see mixed results. Gains in connectivity and education are offset by losses in individual freedom. Rather than making serious inroads toward achieving meaningful access to information for everyone, our indicators show that, for the most part, we are running on the spot. Seemingly for every step forward, the world has taken a step backward. For example:

- There was significant progress in building connectivity infrastructure, particularly in low-income and low-middle-income countries, but this infrastructure remains underutilised.
- The existence of physical connectivity infrastructure is fundamental to guaranteeing the right to meaningful access to information. However, people’s actual ability to access and use that infrastructure is determined by many social factors, including poverty, access to equitable educational opportunities and decent jobs for both women and men, and the presence of a legal and policy framework that protects the rights of all people. Despite significant strides in the availability of information and communications technologies, there has been negligible progress toward solving the significant gender gap that persists in their use. And while connectivity, particularly through mobile connections, has become cheaper in most countries, price remains a barrier that many people around the world cannot overcome.

On a positive note, educational attainment continues to increase across all regions of the world.

Education is key to improving the livelihoods of individuals, families and communities, and it is a critical vehicle through which children and youth can feasibly aspire to decent employment. Yet educational performance can reflect the inequities that exist in many countries, hampering the prospects of young people. In this way, we see that some youth – those with the physical access, financial means and digital skills to use technology and information in a meaningful way – may find resources and opportunities online to support their livelihoods or job prospects. However, when opportunities for education, training and employment are not equitably distributed, youth face obstacles that access to information alone cannot overcome.

Meanwhile, a widespread decline in freedoms spells trouble for the future of democracy around the world.

Excessive limits on freedoms have glaring consequences for democracy as societies lose the power of people’s voices to decide the political direction of their countries. Freedom of expression is the cornerstone of political participation and civil rights and embodies a set of democratic values that affect every aspect of meaningful access to information. A rights-based approach to access to information recognises that the right to information impacts all other rights as well. These rights are interdependent and indivisible.

As the lives of people become ever more intertwined with our interactions online, guaranteeing the rights of people to freely and safely participate in different online spaces is more critical than ever. The notion of the internet as a liberation technology is dwindling and employment are not equitably distributed, youth face obstacles that access to information alone cannot overcome.

Scarcity of data on key indicators remains an obstacle to our efforts.

Our efforts to track the progress of countries and regions toward achieving meaningful access to and use of information are severely hampered by the lack of availability of relevant data. During the period between 2015 and 2018, data for many of the 17 indicators included in the DA2I framework was not updated or made publicly available. In a world that is supposedly overflowing with data, the reality is that there exist significant data gaps in key social and economic indicators. The scarcity of data not only limits our ability to assess the progress of countries but, perhaps most importantly, significantly constrains the design of evidence-based policies that truly address the needs of different communities in each country.

1. This chapter is the second installment, following the DA2I report released in 2017. See: Garrido, M. & Wyber, S. Eds. (2017)
2. See: Garrido & Fellowes, 2017: 11
3. For a more thorough discussion on the importance of the rights-based approach in relationship with the UN 2030 Agenda, see for example: Nussbaum, (2001) Esterhuysen, A., (2016) and Souter, D., (2016)
5. There is an extensive and well-established body of research committed to studying the contributions of access to information for the purpose of advancing social and economic goals. Numerous studies in the fields of communication, particularly development communication (for example, Castells, 1996; McRobbie, 2000, Wilkins, 2000; Castells, Fernandez, & Soy, 2009. Tyrone, 2011; Heeks, 2010; Sey, 2010; Donner, 2018) and information sciences (for example, Burnett & Jaeger, 2011), and more recently in the field of human-centered design and engineering (for example, Stanford, 2010) have shed light on different ways in which communities, civil society organizations, governments, and international bodies used a variety of information and communication resources to advance social change.
7. See footnote 5
8. See Pew Internet Research (2016); ITU, (2016, 2017, 2018); Garrido & Fellows (2017); and EQUALS Research Group, (2019); among others.
9. See: Appendix 3 (Glossary of DA2I Indicators) here: https://da2i-ifa.org/
10. For information on our methodology and a discussion of the challenges faced, see Appendix 1 (Research Process) and Appendix 2 (Data Curation, Processing, and Analysis Strategy) here: https://da2i-ifa.org/node/50
11. A list of countries and their regional classification is available in Appendix 2 (Data Curation, Processing, and Analysis Strategy) here: https://da2i-ifa.org/node/51
13. The DA2I dashboards will be released in July 2019. Please see our website for updates: http://sascha.un.es
14. Regional averages are weighted by country population.
19. For a comprehensive analysis on the state of the ICT gender gap please see: EQUALS Research Group (2019)
23. Ibid
24. More information on this definition of affordability, as well as a list of mobile broadband costs by country, is available at https://wef.org/mobile-broadband-pricing-data/
25. Ibid
26. See for example: ILO (2017, 2018); UNESCO (2017, 2018); and UNDP (2016)
27. Data for 2015 was not included in the analysis due to the small number of countries reporting data for this indicator on that year (n=2)
30. See Garrido, Fellows & Koepeki (2017)
33. Ibid
34. Ibid
35. Ibid
37. Maita Foundation (2018)
39. Freedom House (2018b)
40. Ibid
The provision of access to information is the core mission of libraries. By acquiring, preserving and organising information and allowing users to read and apply it, libraries have long been at the heart of our cultural and research infrastructure. They are guardians of much of the world’s documentary heritage, as well as the source of the raw materials for innovation.

They also have an important social mission. In the 19th century, the building of libraries formed part of the effort to educate and enable those who were not among the elite. Complementing the move to develop labour rights and universal education, they formed a part of a new offering of services – and opportunities – to everyone.

While the world has changed, the core mission of libraries remains relevant, and arguably more so than ever. As it becomes clearer and clearer what can be achieved with information, it becomes more and more imperative that everyone has the possibility to benefit.

The costs of non-access are clear. As detailed in the previous chapter, those who lack meaningful access to information miss out on opportunities for employment or entrepreneurship, cannot engage in research and innovation or in civic life, and are prevented from communicating with friends, family and those who share their interests.

Moreover, a lack of access can cut people off from their cultures and, at the most basic level, from the information they need to make the right decisions for themselves and their communities.

Not having the ability to find, access, apply and create information can too often reinforce social and economic disadvantage, which in turn can raise further barriers to accessing information. This, in effect, creates a bottleneck to equitable development, making it harder to achieve the objectives of the UN 2030 Agenda. As this chapter looks to show, libraries can provide an effective way out of this situation.

As IFLA’s Library Map of the World shows, there are at least 2.3 million libraries worldwide. While many serve specific communities (such as school, academic and special libraries – e.g., institutional or parliamentary libraries), this includes more than 367,000 public libraries, with a mission to help all of their users. This represents a huge potential resource.

Yet libraries do not exist in a vacuum. They depend on a number of conditions to exist, and to be able to fulfil their missions. Clearly funding is crucial, not only for an adequate building and staff, but also for collections and other infrastructure.

Libraries have a two-way relationship with the different elements of the Development and Access to Information (DA2I) Framework. They benefit from good performance in each of the four pillars of the Framework, but, crucially, also support them. Indeed, there is strong potential for a virtuous circle.

This chapter will explore these issues and illustrate the contribution that properly enabled libraries can make. Finally, it will relate the examples discussed to the Sustainable Development Goals.
Libraries and connectivity

The first pillar of the DA2I Framework focuses on individual ability to connect to the internet, be it through a wired or cable connection (or a combination of this and Wi-Fi), or through mobile broadband. Clearly library users also benefit from connectivity, and indeed libraries increasingly require it in order to carry out their missions.

However, this section makes the case that the provision of public libraries is an important component of a connectivity strategy, including in the most advanced countries. This is because internet access in libraries represents a unique value proposition, not least stepping stone toward a greater share of home connections, but also as a complement to even as some countries approach 100 percent internet use. In short, there is a strong two-way relationship between libraries and good performance on the first pillar of the DA2I Framework.

As highlighted in the first chapter, cost remains an important barrier to internet use. Public access in libraries provides a response to this, especially when an effort is made to ensure that costs are either zero or minimal for those who could not afford it otherwise.

Yet cost is relative. Where someone sees great value in something, they will be ready to pay a high price. In contrast, if they feel a product sees great value in something, they could not afford it otherwise. This is the skill that allows others to take advantage of access to information. With growing awareness around the impacts of information literacy among users, this has been shown that this can remove the hesitation or embarrassment that children would feel otherwise. This service has been particularly helpful for poorer families that cannot afford more expensive private options.

Libraries and connectivity

The first pillar of the DA2I Framework addresses the social and cultural context, as well as the ability of users and consumers to get most of access to information. These pillars are closely associated with efforts to deliver greater equality and effective education systems – areas where libraries make a particularly strong contribution.

Regarding skills, libraries have two unique strengths. First is the expertise and experience of their staff in accessing and making use of information. Librarianship is a profession focused on learning and how to navigate the sea of available information, and on teaching others to do the same.

This teaching can consist of helping users find the book or information that corresponds to their needs. However, it also implies developing information literacy among users. This is the skill that allows others to know where to find, how to evaluate, and in what way, to make use of information. With growing concern around the impacts of information poverty and other forms of poverty, the ability to spot the difference between the reliable and unreliable is a crucial skill. Because of this, libraries can also help address the information needs of participants who are more vulnerable (for example, older people, people with disabilities – can be excluded from opportunities to benefit from information. This exclusion can take place through formal rules and cultural practices (the right to own a phone, for example), an inability to take advantage of public services (due to language issues), or a simple failure to adapt to need.

As highlighted in the introduction, there can be a risk of a vicious circle. For example, whole groups who are marginalised are also starved of access to the internet and are unable to improve their lives. This, in turn, simply reinforces their exclusion. There has been discussion of the connection between information poverty and other forms of poverty, suggesting that the need for interventions (notably through libraries) to break this cycle.

Here, too, libraries have a role to play by offering a universal service. This comes both through the nature of the space they provide and the development of services to meet specific needs. The 2017 DA2I Report, for example, illustrated the particular role of libraries in promoting gender equality in access to information. The potential of libraries as a platform for inclusive skills provision is underlined by Shoalhaven Libraries in Australia. In a community of around 100,000, almost a third of households are made up of older people who have either never had children, or whose children have moved away.

Older people are particularly susceptible to being deprived of access to information, given the risk that they are left behind by a market focused on new devices and younger users. This can result, for example, in loneliness and failure to take advantage of eGovernment services. As a result, the Shoalhaven library decided to act to help ensure that all city residents could gain the skills they need to make use of new technologies.

Instead of offering formal courses, the library reached out to local schools to find young volunteers, who would train and mentor users. This programme complemented the existing library’s work on reading therapy – reading to dogs and other animals. This service has been particularly helpful for poorer families that cannot afford more expensive private options. The programme has led to greater confidence in reading and communicating with others, and it has helped build the ability of the children to empathise with others, even those who do not share their families.

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people now access their news through social media rather than traditional news sites. Through an interactive curriculum tailored to the local context of the institution and the need, and by training 428 grassroots media literacy trainers, it was possible to run courses both in libraries and in other institutions. Taking a cascade approach, those who took part in courses were then encouraged to spread their learning with those around them, complemented by J. IREX (2019)


8. IFLA (2019)


10. IFLA (2018)

11. Fraser and Mykytowycz (2015)


17. SDG 8 (Decent Work and Growth), SDG 9 (Industry, Innovation and Infrastructure), SDG 10 (Reducing Inequalities), SDG 11 (Sustainable Cities and Communities), SDG 13 (Climate Action) and SDG 16 (Peace, Justice and Strong Institutions).

In the rest of this year’s Development and Access to Information Report, experts will discuss the role of access to information in delivering five of the Sustainable Development Goals in focus at the 2019 High-Level Political Forum. 11 In each of these areas, there is evidence of how libraries can make a difference.

The multiple impacts of library interventions also recall the concept of “development accelerators” proposed by the United Nations Development Programme. 12 This sets out an approach to planning that identifies actions that can bring progress on a variety of fronts by resolving key “bottlenecks.” As set out in the introduction, if information poverty – a lack of meaningful access to information – is a bottleneck, then the world’s libraries would appear to be a very strong example of a development accelerator. The only challenge now is to ensure that all of them have the recognition and support they need to realise this potential.

Other examples

In providing skills, there is a need to tailor content to individuals’ needs. The specific needs of youth – in particular those who may be at risk of marginalisation for other reasons, such as homelessness or sexual violence 13 – can pose a specific challenge, but dedicated library staff and a willingness to listen can make a difference. 14

The same need to tailor programming is present with other at-risk groups. There are examples of libraries developing programmes to support specific employment and entrepreneurship focused on women (in China and Northern Mexico), on Roma (in Croatia) and on immigrants (in Sweden), to offer just a few cases. 15

Libraries and libraries

The fourth pillar of the SDG 2019 framework looks at key laws affecting freedom of expression and freedom of access to information. As in the previous sections, the activities of libraries both gain from, and contribute to, better performance in this field.

It is clear that libraries themselves benefit from free expression (including the freedom to publish), which supports a strong flow of new books, articles and ideas. Without this supply, libraries would not have much information to which to give access. Sadly, there are numerous examples of laws (and a fear of them, leading to self-censorship) leading to materials being censored or even removed from library shelves.

Libraries are also less able to support researchers and creators when there is less freedom. Those carrying out research rely on academic freedom to pursue their work in line with their best judgment.

Yet as mentioned, libraries also help make rights become a reality. On a basic level, the relationships between free expression and free access to information is clear in the Universal Declaration. By giving people the possibility to read and learn, libraries empower them to create.

Libraries also support transparent and participatory government. Many have realised their potential as places to help users take advantage of open government initiatives, to encourage political awareness and engagement. There are also examples of libraries simply helping users understand their own rights, and thus realise them. 16

Finally, libraries can support efforts to build more peaceful and stable societies, not only through promoting inclusion in their services and collections, but also as memory institutions that can enable healing and reconciliation. 17

Case Study 4: Parliamentary Library, Myanmar

In Myanmar, as part of the transition to democracy, the need for an effective parliamentary library was recognised by the government and donors. With members of parliament gaining new powers to debate the merits of different candidates. A broader campaign in the run-up to the midterm elections in November 2018 saw libraries across the country encourage voter turnout and engagement in the issues. Meanwhile, in Taiwan, China, libraries identified key topics of political discussion in elections and provided courses and reading lists for library users in order to understand more about the underlying issues. 18

Conclusion: The SDG connection

The examples given in this paper provide illustrations, around the world, of the contribution that libraries can make to strengthening each of the pillars of meaningful access to information under the DA2I Framework. By enabling connectivity and access to technology, providing skills and learning for all (even those at risk of marginalisation), and strengthening democracy and accountability, libraries are making real contributions.

A noteworthy point is that many of the examples given could have been cited in more than one of the sections. This echoes the insistence in the UN 2030 Agenda of the fact that actions in different areas of development are mutually interdependent. It is also a reminder that libraries are well-placed to support the delivery of all of the Sustainable Development Goals.

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3. UN Development Programme: www.undp.org


6. IREX (2018)


8. IFLA (2019)


10. IFLA (2018)

11. Fraser and Mykytowycz (2015)


17. SDG 4 (Quality Education), SDG 8 (Decent Work and Growth), SDG 10 (Reducing Inequalities), SDG 13 (Climate Action) and SDG 16 (Justice, Peace and Strong Institutions).
Chapter 3
Quality education and lifelong learning for all – A focus on people

The ambition of SDG 4
When the Sustainable Development Goals (SDGs) were adopted by the United Nations (UN) General Assembly in 2015, they were welcomed by member states, civil society and other stakeholders. The 2030 Agenda aims to provide a universal reference framework for sustainable development that can unite efforts to improve lives and save the planet.

Following on from the 15-year Millennium Development Agenda, the SDGs not only brought new topics to the agenda (such as climate change, economic inequality, innovation, sustainable consumption, peace and justice), but were noteworthy for their universal character, in that they assigned responsibilities to developed industrial countries as well as to developing countries. There was also an increased emphasis on the interconnected character of the goals, and the notion that success in any one area could unlock the potential of the others.

This is very much the case with education. The whole 2030 Agenda clearly reflects this vision of the cross-cutting importance of an appropriate educational response. Education is explicitly formulated as a stand-alone goal – Sustainable Development Goal 4 (“Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all”), but it also seen as crucial for the achievement of many other goals. Education and lifelong learning are the golden thread that runs through the implementation of all 17 SDGs.

The expectations of education are very high: It is a prerequisite for poverty reduction, as well as gainful employment and decent jobs. It is also crucial for sustainable growth, building social cohesion, achieving prosperity, and promoting human rights and equality. The ambitions are clearly expressed in the targets of SDG 4 (UN, 2015), while numerous education-related targets and indicators are also contained within other SDGs.

Access to information is a key factor for success here. To paraphrase Paulo Freire, when people can neither read the words nor the world, they lack possibilities not only to change their own lives or the situation on the national level, but also to have information and knowledge about the issues for which they could fight on the global level.

It is true that, at the level of governments, there is a strong focus on the need to collect reliable data and information as the “key to decision-making” in support of the implementation of the Agenda. This covers collecting data and information from existing reporting mechanisms, developing new methodologies for the collection of data, and “efforts to strengthen statistical capacities in developing countries.”

When it comes to access to information by “common people” – for whom the whole agenda is created – there is a broad reference to “access to information” (in SDG 16), but also many references to information for practical use, such as information “on food reserves,” “health-care services, including for family planning,” or “information and awareness for sustainable development and lifestyles in harmony with nature.” This is complemented by talk of bridging the digital divide, and providing “access to information and communications technology” and “universal and affordable access to the internet.”
In countries struggling with budget weaknesses or a lack of capacity to develop policies, a lack of access to information can stand in the way of progress. Even if there are measures on a national or regional level, it is not clear whether relevant information will be accessible for all.

Access to information is also crucial for achieving education for all. Potential learners need to know about the opportunities available, they need to interact with information as part of the learning process, and both they and their educators need to be informed about the success of policy initiatives in the areas. This essay explores three of the key issues in the design and implementation of SDG 4, and how access to information contributes to success.

2. People, not politicians: helping everyone to learn

A first key question comes from the claim that it is universal as a whole – and of course SDG 4 – is centred on people. As a result, special care is needed when it comes to its implementation, and benefit from the transformative change that it promises, rather than simply being subject to the decisions of others. If information is power, access to information is crucial if people are to be empowered, and so the SDGs achieved.

Yet there is a risk that more effort goes into building capacity for governments, notably to monitor and report on their achievement (and perhaps in a more important, but should not be the only focus), than into supporting access to information for everyone. Given that those who have access to the relevant information have the power, it is crucial that access to information is considered as a human or civic right, and the right of all those whom the Agenda is addressing, in order to empower them to take the role of agents of change.

When talking about ensuring the rights of individuals, it is important to remember the motto of the 2030 Agenda: “No one left behind.” In other words, it should be for all countries and groups of people. No one should be excluded. But this will remain wishful thinking if we continue with “business as usual.” When it comes to education and information, we should note the conditions faced by at least two groups.

Firstly, people in less developed countries face multiple forms of marginalisation and deprivation. In countries struggling with budget weaknesses or a lack of capacity to develop policies, a lack of access to information can stand in the way of progress. Even if there are measures on a national or regional level, it is not clear whether relevant information will be accessible for all. Extensive experience has shown that proper guidance is useful, in terms of sharing information about education possibilities, offers and provisions that might be suitable, especially in non-formal education. This can be the case for everyone, from people in huge urban areas living in slum conditions to those in remote rural areas who are completely cut off from any source of relevant information. They are at risk of being unaware of the possibilities available to them, even if there is a lack of awareness of the effect of the even the best-conceived policies.

The same principle applies in the context of the agenda-setting stages of the policy cycle. Here, there is a risk of a one-way communication where “beneficiaries” – especially in less developed countries – are passive receivers of information that has been selected, shaped, “packed,” interpreted and distributed at power centres that exclude participation of “common people.” The narratives of the SDGs and means of implementation are created mostly by the global players, and the “beneficiaries” are left unsure about the new agenda, and seldom have even the opportunity to give feedback of their active participation in the transformation processes.

Secondly, adults and older people are also at risk of being left behind in the context of education efforts. In the SDGs, adults only feature as a target group in Target 4.6 – related to achieving literacy and numeracy, with very vague success indicators ("a substantial proportion of adults..."). The reference to “lifelong learning” may not help either. While the concept was once welcomed for its efforts to promote continuous education that places the learner at the centre, it has not fulfilled its promise. Adults and older people have open doors to a focus of resources on younger learners at the expense of older ones. Moreover, putting the person in focus and insisting on individuals, it ended up giving adults full personal responsibility (most notably the financial one) for their learning and has diminished the responsibility of the state. The emphasis on non-formal education and on learning generally (instead of education) has weakened existing institutional support and put educational outcomes high on the agenda (at the same time neglecting educational structures and processes). Thus, lifelong learning remains a frame in which adult education disappeared. Marginalisation of this sector gained a powerful instrument, an excise supported by the high-level policy approach. (Oriolović and Popović, 2018, p. 7)

Adults also belong to the group that, contrary to youth, have lost access to information about education possibilities and options. This can be for geographical, economic or political reasons, or because there is a social stigma, shame or previous bad education experience that prevent them from reaching out for information, for chances, opportunities and prospects.

The increased weight given to digital access to information can cut the right adrift – much informed about it, and seldom have even the opportunity to give feedback or to take active part in the transformation processes.

3. Digital technologies – a necessary tool, but not a silver bullet

If the most prominent feature of the new Agenda, it is the faith in ICT and digitalisation as a “silver bullet.” The high level of trust in the power of technology is based on several successful projects where mobile phones or computers have been used to achieve the goals within a target group. It cannot be denied that digital technologies play an especially central role in the implementation of Education 2030 and SDG 4. But it is wrong to understand information in the digital age simply as a digital context. Not all information is digital and not all knowledge need be acquired online. Imagine the digital technology should be used, but how. A mixed approach is needed, but it seems to be overlooked or neglected in SDG 4.

4. Education and meaningful interaction with information

A focus on “providing” education can also overlook the fact that knowledge, especially in adult education, is created through two-way communication. The one-way approach, which risks blaming the case with the more restrictive current understanding of “access to information,” assumes fixed, stable and reliable sources of information on one side, and passive receivers on the other. This is a very traditional, even and outdated understanding of education and teaching, and increasingly inadequate, especially for adult education. Effective agents in delivering development, people need to be able to co-create knowledge based on information.

Linked to the previous point, a key condition for active citizenship is thinking. People can be reflective about their own learning and their role in how they will deal with the contradictions, difficulties and challenges in that
There is a need for much stronger efforts to develop critical access to information as well as media literacy, enabling citizens to question the sources of information, to evaluate them and to recognise various kinds of propaganda, manipulation and fraud. Critical thinking and critical reading of information are all the more essential as the role of ICTs grows, yet cannot be successfully covered only by using ICT.

Many of the current problems the world is experiencing are not due to the lack of pure digital know how, but the lack of related skills and attitudes. These require much more than the ability to get hold of a book or connect to the internet. Non-virtual services and physical resources are important, not only for the techniques of reading and writing that are crucial for the literacy skills, but also for recognising and understanding three crucial aspects of information: context, content and meaning.

5. Beyond metrics, a necessary focus on outcomes and results

There are implications from the heavy focus on measurement 1, which are especially apparent at the community level (children, out-of-school youth, etc.), where the lack of classrooms and teachers is an important issue.

In order to meet some of these challenges, the “Ang Guro kong Pulis” educational project has been launched under the leadership of Manila Police District. The project aims to give free basic education to street children. As a part of the project, one of the police vehicles has been filled with various books and turned to a mobile library, and several police officers have been visiting the streets of Roxas Boulevard in Manila.

Starting in October 2018, they offered children the books to read, with the idea of thus keeping them away from drugs and weapons. After the initial successes, the parents of children were also included into the programme; they would come along, and police officers with a background in education, who were tasked with teaching and bringing books, started teaching parents too. The mobile library now has 11 stops or stations, with ambitions of increasing the number.

The police provide meals for the participants, while several colleges and universities have been helping by conducting seminars on drugs, crime and basic first aid as well as supporting the programme by donating old books and, in one instance, by teaching basic education by giving lessons in basic reading and writing in English and Filipino, maths and civic education. This is a long-term solution that tries to support street children through education, but with the potential to include communities too.

Example: “Ang Guro kong Pulis,” a mobile library campaign in Manila

Although the Philippines has one of the highest literacy rates among Southeast Asian countries, there is still a gap in literacy and a need to achieve inclusivity in education. The gaps are especially apparent at the community level (children, out-of-school youth, etc.), where the lack of classrooms and teachers is an important issue.

We need to be realistic about the possibility of drawing on private funding and domestic resource mobilisation, given both the need to ensure a continued focus on public interest goals in educational policy, and the irony that it is often the minimal taxes paid by private multinationals that lead to governments having insufficient money to spend in the first place.

6. The role of libraries

As already indicated a number of times, libraries have a potentially valuable role to play in delivering SDG 4, and in particular in addressing some of the challenges set out above. Their work is not only about the “good, old” habit of reading books.

There are recent studies by Vesna Crnogorac that point out the important role libraries have in democratisation of society and in the transformation of closed societies to democracy. “More than ever before the long history of libraries, there is a responsibility to create the conditions for free access to knowledge and information, regardless of the differences (ethnic, political, religious, ethical). The library – by nature a democratic institution – serves society by serving the individual citizen who finds a place where he/she can achieve freedom of expression and free access to information. We are in a historic moment as regards respect for democratic values, and the public library needs to redefine its role from being a contemporary café to being a useful tool, but not a magic solution.

Yet this role of libraries is not sufficiently addressed in the UN 2030 Agenda notably SDG 4. Bearing in mind all of the difficulties the implementation of the Education agenda is facing, we can hardly afford to give up such a powerful resource and important ally in our efforts.

7. Conclusion

The 2030 Agenda puts an accent on education as an important precondition for lifelong learning. Crucially, it also needs a mechanism to access to information as a vehicle for transparency and a gateway to adult education.

Furthermore, meaningful access to information provides the basis for knowledge and should be seen as a precondition for the development of skills and thinking skills and democratic citizenship, whereby data and raw information would be politically chosen, connected, reflected and assessed. The role of libraries is also important, since ICT and the internet should be seen as a useful tool, but not a magic solution.

Access to information is an important precondition for achieving the targets of SDG 4. Without a full recognition of this in the discourse about the 2030 Agenda especially in the context of monitoring the implementation of the Agenda, with SDG 4 of course included in the efforts. The UNESCO Institute of Statistics is absolutely right in warning on this data to warn of gaps in implementation, and is clearly inviting “countries, donors, international organizations and engaged citizens – to make the case for education at the next High-Level Political Forum on Sustainable Development” since even “the most basic data show that we are far from the goal of ensuring that every child is in school and learning by 2030.”

But it is obvious that an approach to SDG 4 focused only on standards and so greatly misses out on non-formal education and lifelong learning. Crucially, it also needs a mechanism to access to information as a vehicle for transparency and a gateway to adult education.

1. There are comparatively few discussions about how to support implementation, and hardly any lessons learned from the Millennium Development Goals (MDG) experience does not take into account the fact that the main challenge to access in the MDG indicators for Education for All (EFA) movement has not been resolved, or have even worsened. The strong contemporary conviction that the creation of unambiguously measurable indicators was one of the main elements during MDG implementation (Popovici, 2015). Criticising the high-stakes testing on students’ motivation and learning, Amnest and Berliner remind us that “we should remember that in the former Soviet Union the comment that weighing a pig every day won’t ever make the pig any fatter. Eventually, you have to feed the pig” (2003). We risk focusing only on a limited number of success cases, and ignore the waste that occurs when serious, systemic and structural problems are left unaddressed because they do not show up in the indicators.

2. UIS urges: “We need data to track progress over time. We need data to pinpoint the barriers to education access and quality. We need data that are disaggregated to ensure that no child is left behind. We need data that support national priorities. We need data that are internationally comparable. We need data that demonstrate what works, so that resources can be channelled for maximum impact” (Montoya, 2019).
Access to information and ICT for more inclusive economic development, employment and decent work opportunities

Chapter 4

A2I for decent work and economic growth

The achievement and measurement of the 2030 Agenda will entail a multidimensional arrangement of solutions. To this end, the Agenda highlights the importance of its means of implementation for achieving the Sustainable Development Goals (SDGs) through the mobilisation of financial resources and the development of capacities and technology, as well as through data generation and institutional strengthening. Notably, the Agenda deems that information and communication technologies (ICT) play a facilitative and supportive role in this context, which confirms their importance for opening up major possibilities for the acceleration of human progress (Del Río et al, forthcoming).

As we move toward Knowledge Societies, information and knowledge have an increasingly significant impact on people’s lives (UNESCO, 2003). In this regard, access to information can be considered a complex process that encompasses “the rights and capacity to use, create, and share information in ways that are meaningful to each individual, community, or organization” as stated in the Development and Access to Information (DA2I) Report 2017 (Garrido & Wyber, 2017, p. 15).

In this context, it has been widely noted that ICT can play a key role in improving access to and sharing of information by potentially reducing the costs of producing, sharing, distributing and visualising information and knowledge, which is essential for the democratic functioning of societies and the well-being of each individual. ICT may therefore empower individuals, allowing them to exercise their rights, be economically active, and learn new skills. Furthermore, the internet and mobile communications have massively accelerated the pace and volume of information available, as well as its reach into even the most remote parts of the world.

Additionally, access to mobile services may bring new economic opportunities for low-income populations, for example through services such as m-banking and e-commerce. Not only is financial inclusion an important aspect for small businesses and entrepreneurship, but m-banking and micro credits also can lower transaction costs and foster economic growth. Furthermore, in many sectors – such as health, education, the labour market, and food and agriculture – a broad set of services, ICT-enabled solutions and resources can lead to transformations that can foster social, economic and political development in a sustainable manner.

In this scenario, it is expected that ICT will increasingly take over routine and analytical tasks, not only confined to manual tasks in manufacturing, but also to analytical tasks of decision-making (European Commission, 2016). It is therefore of utmost importance that people have the necessary skills for using the elementary functions of ICT meaningfully and efficiently. As the European Commission’s report on ICT for work (2016) shows, digital skills are required across all types of work, including jobs outside the office. Notably, most jobs require basic digital skills, including being able to communicate via email or social media, to create and edit documents, to search for information, or to protect personal information online. Individuals who lack digital skills are consequently at risk of marginalisation not only in the labour market, but also in day-to-day life.
ICT, therefore, cut across all sectors, including health, education and the economy, and the internet can be an important catalyst of development for emerging economies and countries. For instance, they can provide extensive and growing access to information, services and applications that may add value to people’s lives, enhance their productivity and enable them to access a wide range of roles (ITU, 2018, p. 91). In this sense, although within the SDG framework there are specific mentions of ICT, they can potentially contribute to all SDGs.

Particularly for achieving decent work and economic growth – Goal 8 of the SDGs and economic growth is needed in a sustained, inclusive and sustainable manner, along with the promotion of productive employment and decent work for all. In this respect, ICT, by facilitating access to information, can play an important role by contributing to entrepreneurship, job creation, employment, education and training, economic productivity and growth, creativity and innovation, and financial inclusion.

This chapter looks at how ICT potentially contribute to achieving SDG 8 by improving access to information as well as offering a set of ICT-enabled solutions and services. It examines the numerous aspects to be considered for leveraging ICT for decent work and economic growth and the SDGs in their social, economic and organisational levels. It also addresses the obstacles and conditions for meaningful access to information and to financial services. Finally, it emphasises the role of education in bringing the SDGs and advocates for the need for harmonised indicators for this purpose.

1. ICT and access to information

In considering ICT as a means for improving access to information, the focus here is on access to information as this is a crucial element of the SDGs (Hafkin, 2017). ICT potentially increase access to information, which in turn could empower individuals, allowing them to better exercise their rights, be economically active, acquire new skills, and find better means for earning a livelihood. So empowered, they can potentially participate in decision making and holding their governments accountable, and they enrich their cultural identity and expression. Thus, access to information is crucial for enriching the collective knowledge-building process as well as for economic, social and political development (IFLA, APC & TASCHA, 2014; IDOC, 2016; World Bank, 2016).

SDG 8, concerned with decent work and economic growth, sets four targets encompassing different aspects that require access to information, such as productive employment, education and training, economic productivity, entrepreneurship, creativity and innovation. For people to learn and use new skills that may be relevant for work, especially in a changing and dynamic world, access to information is an important step in a complex process. Not only does accessing information require specific physical, social and legal preconditions, but information itself needs to be transformed into knowledge in order to be useful.

Furthermore, when aiming to achieve full and productive employment and decent work for all women and men, it should be noted that “the relationships between gender equality and access to information is a complex one that involves a chain of events that reinforce themselves in a feedback loop” (Hafkin, 2017, p. 83). On a similar note, access to information and knowledge – together with economic rewards – is crucial for the development of a creative economy, and in view of the growing contribution of the creative industries to national economic output, most countries are seeking to adopt policies to develop their creative industries to strengthen their competitiveness in the global economy (UNESCO, 2013a).

Given their direct and secondary effects, ICT can contribute toward accomplishing decent work and economic growth, both by promoting access to information both by individuals and organisations.

1.1. ICT for improving access to information by individuals

ICT potentially allow people, anywhere in the world, to access information and knowledge almost instantly (ITU, 2006). In particular, by expanding the information base, lowering search costs for producers, and creating information goods, ICT can facilitate searching, matching and sharing of information and contribute to greater organisation and collaboration among economic agents (World Bank, 2016).

Particularly in agriculture, ICT can be used to keep workers informed about prices, inputs or new technologies, potentially reducing time and costs, as well as friction and uncertainty, by eliminating cumbersome paper-based transaction coordination with traders. In short, ICT can potentially affect economic development as they can help reduce barriers to accessing information and reduce service costs. For example, a mutually beneficial transaction might well be hindered if two parties cannot find each other or acquire enough information to confidently proceed with the transaction; in such cases, the transaction costs are infinitely high. An example of the use of technology to overcome service costs is the emergence of e-commerce platforms, environments where supply and demand sides meet – which has now become easier for producers to find customers (World Bank, 2016).

Additionally, when addressing full and productive employment and decent work, Target 8.5 – “Achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and eradicate child labour, with a particular focus on the most vulnerable persons, including indigenous peoples” – explicitly recognises the need for inclusiveness. In addition, indicator 8.5.1 measures the average hourly earnings for all workers, both formal and informal, by occupation, age and disability status, and indicator 8.5.2 addresses employment rates, both for work and not for work, explicitly the need for inclusiveness. In this regard, ICT can potentially contribute toward addressing inclusive access to decent work and economic growth; and may increase economic opportunities (UNCTAD, 2014).

In terms of inclusive employment, according to the UNESCO Global Report (2013b), persons with disabilities are much more likely to be employed or economically inactive, and even those who are economically active often earn wages lower than non-disabled counterparts. In this regard, technological developments may open new avenues for social inclusion, learning, employment and participation of persons with disabilities (UNESCO, 2013). To this end, ICT can enable multiple means of communication – voice, text and gestures – facilitating access to information by persons with disabilities, as well as social interaction, thus opening up significant and widespread opportunities for employability and entrepreneurship. For example, in addition, telework can allow people to engage with work remotely (World Bank, 2016), overcoming difficulties related to displacement.

Furthermore, in order to achieve Target 8.5 in particular – as well as the entire 2030 Agenda – Member States must bridge the digital (digital) gap, so that women can fully benefit from access to the internet and the resources that ICT may provide. Generally, women tend to be poorer than men, have lower education levels and hold less powerful positions in businesses and in politics. This being said, there may be significant inequalities and barriers faced by women that prevent them from accessing the opportunities provided by ICT, including those related to social norms, the division of labour, gender stereotypes and even gender-based violence (UNCTAD, 2014). ICT can potentially allow women to increase their opportunities for employment, entrepreneurship, and social good in areas that are increasingly embedded in everyday life, such as facilitating financial transactions, filling out government forms, and sectors of the labour market around the world (Garrido, Fellows & Koepke, 2017). Thus, in different spheres of life and economic, women can profit from ICT, as these can often obviate the need for mobility and help overcoming information access. This, in turn, facilitates more informed decisions and may increase economic opportunities (UNCTAD, 2014).

Finally, beyond access, other barriers result in not being included as women seek to effectively utilise information” (Hafkin, 2017).

Garrido & Wyber (2017) argue that distinct gaps in access to education and training opportunities can contribute to unemployment levels among youth. Therefore, increased access to information could potentially contribute to developing employable skills and overall employability, which relates to the achievement of Target 8.6 – “Substantially reduce the gender disparity in access to and use of ICT tools and resources, such as modern communication technology (ICT), open educational resources (OERs), and other tools and resources, such as lifelong learning.”

Finally, future scenarios point to the emergence of new categories of jobs, in the context of advancing technologies, partly or wholly displacing others. This means that the number of skill needs and new occupations will change in many industries and transform how work is done. This entails difficult transitions for millions of workers and the need to focus on developing a new surge of agile learners and skilled talent generally.

In this context, many stress the relevance of developing a particular set of digital skills – grouped into four areas: life and career skills; learning and innovation skills (critical thinking, content creation, problem solving, etc.); key subjects and 21st century skills – namely 21st century innovation skills (critical thinking, lifelong learning, and communicational literacy) and knowledge generally are composed of computational, informational and communicational literacy (Hinostroza, 2017). Such competencies include one’s ability to effectively use and create technology, create and communicate in different spheres of life – at home, in the workplace and, generally, in society (Fralin et al., 2013, cited in Hinostroza, 2017, p. 16).

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1. Information, creativity and innovation enabled by access to information through ICT

Given that information is currently disseminated at an ever-expanding rate and that it is an essential asset for economic competitiveness, it is important that both enterprises and governments promote ways to develop the necessary skills for making effective use of information in creative and innovative ways. Since information is considered fundamental to economic productivity, the sunk costs for its creation must be overcome. However, although the cost of producing information is high, this is not the case for its reproduction (Shapiro & Varian, 2002). As the use of ICT increases and information becomes more widely available, the cost of accessing information decreases.

This poses the following challenge for enterprises: there is an increasing number of competitors capable of reproducing information that is produced by organisations. Therefore, given this more competitive environment, enterprises must develop organisational structures capable of responding rapidly to technological and market changes.

Target 8.2 calls for “higher levels of education and training through diversification, technological upgrading and innovation, including lifelong learning, on high-value added and labour-intensive sectors.” Access to and sharing of ICT, as technology for promoting innovation, and once this becomes a routine within organisations, this may lead to greater economic productivity and technological diversification, given that the free flow of information is necessary for knowledge creation and creativity, which in turn fosters a dynamic and productive environment.

2. Financial services as ICT-enabled solutions

A broad set of public and private services – both online and offline – are leveraged by ICT, as ICT-enabled solutions and resources – may foster social, economic and political development in a sustainable manner, by contributing in areas such as education, health, finance, the labour market and public administration.

Currently, 2 billion individuals and 200 million businesses in emerging economies lack access to savings and credit, and are not able to participate in the formal financial system (McKinsey Global Institute, 2016), preventing them from engaging in economic activities that could transform their lives as well as blocking economic development1. Financial inclusion is particularly relevant for vulnerable populations and may contribute to greater security and stability; this allows, for example, one to better plan for the future or to respond to unexpected events (Diniz, 2018).

Target 8.3 aims to “promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation.” Accessing and using information efficiently and productively are essential for enabling enterprises to create and participate in dynamic ecosystems, in which the production of knowledge, along with its use in practice, leads to innovation and entrepreneurship, favouring the emergence of dynamic sectors and economic growth. The dissemination of ICT facilitates the production of knowledge and its sharing free of charge, favouring the entry of several actors in the process or product development. Open environments – those in which the access to and sharing of information are not restricted – are more conducive to creating knowledge and innovation. Finally, the idea of promoting open and friendly environments for the free movement of information to foster knowledge creation and innovation applies to both nation states and enterprises.

Through the internet, broadband and mobile phone-based ICT infrastructure, people living in poverty may increase their capability to improve their economic situation by accessing reliable financial services that can provide a vital safety net.

In this context, ICT – together with the skills and confidence to use them – can help to advance financial inclusion, which is a key factor in broadening education, health and economic opportunities (Diniz, 2018). The 2030 Agenda recognises that financial inclusion is vital for small businesses and entrepreneurship, and particularly Target 8.10 aims to “strengthen the capacity of domestic financial institutions to enrolage and expand access to banking, insurance and financial services for all.” Likewise, a related indicator explicitly refers to ICT 8.10.2 “Proportion of adults (15 years and older) with an account at a bank or other financial institution, and with a mobile-money-service provider.”

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Access to information is a matter that cuts across the entire 2030 Agenda and is therefore tracked by indicators that are arranged under different goals and targets. Likewise, all SDG goals and targets are interdependent and must be pursued together, since progress in one area often depends on progress in other areas.

For the follow-up and review of progress toward achieving the SDGs, 10 criteria were established by the UN Statistical Commission for the collection of robust Global Monitoring Indicators, which will be compiled by international agencies using disaggregated data from national statistical systems. Timely and usable data are critical for informed decision-making, monitoring of progress, and evaluation of outcomes.

In light of this, ICT are explicitly recognised as a cross-cutting means of implementing the Agenda, as well as for their key role in the measurement of progress on all aspects of sustainable development. To this end, it is important that all areas where ICT play a relevant role are adequately measured and monitored. To achieve this, it is crucial to have internationally comparable ICT indicators based on commonly agreed definitions and methodologies, which allow policymakers and other key stakeholders to identify ICT-related trends and challenges.

ICT are strongly linked to the access and use of information, which is important for economic development, education, training, and employment. ICT may have a more integrated and sustainable development. In particular, women and people with disabilities, as well as youth, mentioned by Targets 8.5 and 8.6, can benefit from the opportunities offered by these technologies.

However, more than ever, access to information requires the skills necessary to access, acquire, analyse, and interpret the tools offered by ICT, in order to ensure that all benefit equally and that no one is left behind. If social and digital gaps are not addressed, inequality may be further reproduced, and those with skills – digital, transfer, or other – may be better positioned to find a job and earn better wages. In this regard, the development of digital literacy skills, such as information processing for youth and adults is a priority, in particular for groups that are potentially economically or socially disadvantaged.

Due to the enhanced dissemination of ICT access and use, information is becoming more widespread among individuals, communities, organisations, and increasing their chances of acquiring and developing knowledge that can be used to access financial services, favouring inclusive economic growth. For enterprises, the challenge is to transform ICT into greater circulation of information into better decision-making and knowledge for innovation and, by doing so, to support Target 8.2 and Target 8.3.

Both for accessing information through ICT and for using ICT services and resources, such as financial services, there are many conditions that must be met in order to ensure that no one is left behind. Once again, skill development and digital divide refers to lack of skills, these are critical for ensuring that people can benefit from and have meaningful access to information and avoid reproducing inequalities.

Along with the high cost of telecommunications, micro and small enterprises face another barrier to accessing financial services: they often lack the necessary infrastructure to access ICT and financial services due to poor communication infrastructure and/or prohibitive cost. These are often hindered by the prevalence of obsolete technologies and prohibitive cost of installing new technology, and suffer from a lack of qualified staff to utilise accessible ICT and financial skills (The Earth Institute, Columbia University, & Ericsson, 2015).

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Finally, in light of the key role that ICT play in achieving SDG 8, and the potential offered by ICT for improving its access, use, creation and sharing, it is of utmost importance that timely and relevant data are collated and shared by policymakers and to monitor the progress of internationally agreed goals such as the 2030 Agenda.
This essay explores the role of libraries in knowledge sharing, focusing especially on their digital expression and ways through which they can contribute to poverty reduction. It begins by setting the context in terms of the Sustainable Development Goals (SDGs) and the distinction between “open/public” and “closed/private” knowledge. The next section explores important issues around the meanings and use of “information” and “knowledge,” the needs that poor and marginalised people have for knowledge, and the importance of gaining more evidence about how libraries, both virtual and real, can be used to influence poverty reduction. The penultimate part of the essay then examines the diverse ways through which libraries can be used to reduce inequalities, and includes two contrasting case studies, the Indian Public Library Movement and Portuguese micro-libraries. The essay concludes with recommendations on how the obstacles facing more extensive use of libraries for reducing inequality can be overcome.

**Context: open and public, or closed and private?**

Knowledge is powerful. It has therefore tended to be used by the rich and powerful throughout history to maintain their status and perpetuate inequalities in their favour. However, there have also always been those who have tried to share knowledge more widely, often on the moral grounds that knowledge is indeed empowering, and can transform social and political structures. This is as true today, when formal knowledge is increasingly being mediated through digital technologies, as it has been in the distant past, when knowledge was largely shared through books.

SDG 10, which focuses on reducing inequalities, provides an important lever through which such agendas can be promoted in the decade ahead.

**SDG 10: the troublesome goal**

Recent efforts to reduce poverty have generally focused mainly on economic growth, rather than reducing inequalities. Agenda 2030 and the SDGs (UN, 2015) thus largely continue the focus on economic growth that lay at the heart of the United Nations’ previous Millennium Development Goals (MDGs) of 2000. However, the SDGs are many more in number, and seek to combine the largely economic growth interests of the MDGs with concerns about environmental change and sustainability. They also include an important tension, represented by the apparently out-of-place SDG 10: to reduce inequality within and among countries. These focuses on increasing growth and reducing inequality compete with each other, because economic growth has almost always been associated historically with increasing inequality, unless very considerable attention is paid specifically to sharing the benefits of that growth widely throughout society (Oxfam, 2019). The processes giving rise to these inequalities have been dramatically increased by the design and spread of ever more rapidly evolving digital technologies (Unwin, 2018). Yet, the 10 targets of SDG 10 make no direct mention of ways through which knowledge can be used to reduce inequality, nor of the use of digital technologies to do so.

To understand this tension between growth and inequality, it is essential to address the distinction between relative and absolute poverty (Unwin, 2007). In essence those advocating an absolute measure of poverty, as embedded within the MDGs and most of the SDGs, do so based on the positive notion of individuality and competition, whereas those advocating...
a relative standard do so in the normative sense. Libraries are also communal and should organise economic activities co-operatively (O’Boyle, 1999). The overwhelming dominance of notions of “individual” rather than “communal” human rights (Unwin, 1999) in the UN system and beyond, and the power of major global corporations in contemporary international governance, have fuelled this emphasis on maximising growth rather than minimising inequality. Absolute poverty can indeed be reduced by economic growth alone, but relative poverty cannot. The SDGs and the High-Level Political Forum on Sustainable Development have both failed to sufficiently recognise this tension, and have thus also failed to provide mechanisms through which damaging inequalities can be reduced.

**Private and public knowledge**

The holding of knowledge by individuals or communities is central to the power relations thus played a crucial role in access to texts. Fixed libraries were thus expensive.

Since knowledge is power, they were usually kept in the “private” libraries of elites. New forms of printing in Europe began to democratise knowledge sharing from the 15th century onward, but the idea of “public” libraries only really began to take shape in Europe in the 19th century (Haider & UNESCO, 2011). Such distinctions between public and private closely parallel the difference between communal and individual approaches to poverty reduction (Table 1). In practice, these concepts, shown as binary oppositions in Table 1, usually blur into each other and are at either end of the spectrum, but they are shown here to reflect fundamentally different conceptualisations of poverty, the role of libraries, content, digital technologies and development.

UNESCO, in particular, has for a long time played a strong role in advocating that more support should be given to the creation of knowledge societies in which all citizens are able to access and use the information that they require to live fulfilled lives (Mansell & Wehn, 1998; UNESCO, 2005). As Souter (2010, p.11) has summarised, “By knowledge Societies, UNESCO means societies in which all have the capabilities not just to acquire information but also to co-operate in economic and cultural understanding, which empowers them to enhance their livelihoods and contribute to the social and economic development of their societies.” Such ideas reinforce the notion that information and knowledge poverty and inequality is an important part of any global development agenda (Haidar & Unwin, 2010). However, there are considerable challenges in delivering such a vision, some of the most important of which are explored further below.

**Marginal and elite knowledges**

Traditionally, librarians have served as the gatekeepers to knowledge by deciding what should be in a library and what should be excluded. This has meant that libraries have generated curatorial knowledge that reflects the society in which they exist. Almost by definition, they have also been the preserve of the elite, rather than the people. Poor and marginalised people and communities nevertheless also have immense knowledge resources. Passing down information through oral traditions, they know, for example, how to eke out an existence in environments where a “well-educated”iterate banker, academic or politician would not even be able to survive for a few days.

ICTs have, though, begun to be used to subvert traditional concepts, in two main ways:

1. Through the use of audio and video technologies and development discourse.
2. By incorporating indigenous knowledges into its practices.

It must never be forgotten that marginalised people with few resources still have very powerful knowledge. It is just a different kind of knowledge from the knowledge that the rich deem to be important. This essay suggests that both types of knowledge should be regarded as equally “valuable” in any type of development discourse.

**Inequalities: seeing and hearing the poor and marginalised**

In contrast to the MDGs, SDG 10 provides a much clearer framework in which to consider inequality, and in recent years there has been some evidence that UN agencies and some governments are recognising the need to balance economic growth with attention to inequality, if only because of the realisation that growing inequalities themselves hamper growth (Cingano, 2014; UNESCO, 2018). There is thus a healthy growing understanding that poverty and inequality should not just be consistently marginalised. The ways that different human characteristics and dimensions of life intersect and reinforce poverty have drawn renewed interest, highlighting how certain groups of people tend to be consistently marginalised. The processes associated with economic growth, particularly the relentless and ubiquitous inroads of digital technologies, work to keep them in poverty. These include populations with disabilities, out-of-school youth (children at risk of living and working on the streets), girls and women (especially in traditional patriarchal societies), ethnic minorities, and refugees.

It is very important that the voices of these marginalised individuals and communities are heard, not only within the country where they live, but also globally in the formulation of policies and initiatives such as the SDG process itself. Their stories need to be in the libraries of officials, and policymakers, who in turn need to start
of virtual and digital libraries since their origin in the mid-1990s has had many benefits, such as not occupying much physical space (there remains a necessity for servers to host the content), being available all the time, facilitating searching, enabling the preservation of texts and images, and providing multimedia resources, many questions still remain about how these should be funded, the balance between open and proprietary content, the extent to which they enable community interaction, and ultimately whether they increase or reduce inequalities. While some libraries are being transformed into digital hubs, it is often the already privileged who benefit most from these, rather than the poorest and most marginalised.

The need for evidence and data
The challenges of evidence in decision making need to be addressed. This includes the important need for more data and evidence upon which to reach decisions about the relative impact of different kinds of library solutions for reducing inequality. As Garrido and Fellows (2017) note, it is remarkable that the SDGs do not actually mention access to information as a specific factor in reducing inequality. There therefore needs to be much more exploration and research on the ways through which such access, especially through both physical and virtual libraries, can enable the most marginalised and vulnerable people and communities to benefit. Much more data is also required on the use of “libraries” and digital repositories by marginalised people, and the extent to which such usage may reduce inequalities, so that better knowledge-based development policies can be shaped.

Libraries addressing inequalities
The boundaries between the virtual and the real, and indeed between humans and machines, are more generally, are becoming increasingly blurred. Yet these concepts retain value and are particularly useful in helping to understand how libraries can address inequalities.

The virtual...
The explosion of information and learning resources online over the last decade has been remarkable, and many people now have the world’s knowledge at their fingertips through the internet. However, just under half (48.8 percent) of the world’s population is still not using the internet (ITU, 2018). Digital technologies provide the opportunity to serve the needs and interests of richer rather than poorer people. Hence, to reduce inequalities, it is essential to increase access, to enable people to be able to use learning resources, and for content to be relevant to their needs. All three of these require very considerable effort, and a change in the mindsets of those advocating the use of ICTs to deliver the SDGs away from an emphasis on economic growth and toward the reduction of inequalities.

Libraries and digital technologies provide a very important means of communication and knowledge sharing, and there are now more mobile subscriptions than there are people on the planet. However, such usage is spatially very variable, with African countries and other least developed states more marginalised people can indeed access and use digital technologies and resources. When these are truly multi-purpose and multi-angled, they can indeed serve as places where people in isolated areas are able to access health, educational, cultural and economic knowledge, and share their own experiences online should they wish. They nevertheless need to be appropriately planned and resourced, and measures must be put in place to mitigate the numerous negative aspects of the digital world, dominated by commercial interests (UNICEF, 2017).

Libraries, though, are much more than just places where information and knowledge are transacted. They also serve important social, cultural and indeed political roles. In an increasingly individualised digital world, dominated by economic exchange, they remain places where the soul of a society can be found and shaped.

Addressing the obstacles
If we ignore the poor in our midst, we have lost our humanity and our souls. For those who think it...
is wrong that 26 people, mainly men (n=25) from the U.S. (n=15), at least 10 of whom have made their fortunes from the technology sector, should own the same as the 3.8 billion poorest people in the world (Oxfam, 2019), the obstacles preventing progress toward SDG 10 must be identified and overcome. Three initial steps are essential:

• Recognising that reducing inequalities is about the will to do so, and not the money. If the UN system as a whole as well as the leaders of specific governments are to begin to reduce inequalities in their states, then they need to focus on this objective above the recent emphasis that has been placed on economic growth. Failure to do so is not only morally wrong, but it will have very significant impact on the global economic system, social cohesion and political stability.

• Achieving affordable universal access to high-quality digital connectivity. In a world that is increasingly dominated by information sharing through digital technologies, it is essential for these to be affordable, reliable and of sufficient speed everywhere, so that poor and marginalised people and communities can potentially benefit from the knowledge acquisition that they enable.

• Serving the interests of the poor and marginalised. Access alone, though, is insufficient. The information and communication opportunities enabled by technology must be relevant to the needs of the most marginalised, who in turn must be able to use them for their own empowerment. It is here that librarians and libraries, virtual and real, continue to have such a crucial role in shaping societies for the better.

Micro-libraries: an example from Portugal
In contrast to the problems faced by large traditional libraries, the micro-library movement reflects a more bottom-up and communal approach to knowledge sharing. In many instances, as in Portugal and the U.K., this has been supported by telecommunication company foundations, offering old telephone boxes for use as micro-libraries, thus once again reinforcing the connection between ICTs and knowledge sharing, albeit in a very different idiom. In Portugal, for example, the PT Foundation (2018) “reuses the old telephone boxes and establishes partnerships with local councils and others, for the adaptation, placement and promotion of micro libraries that aim to strengthen community ties, promote citizenship, encourage reading and promote the love for books in a totally unexpected space.” Since the late-2000s, such initiatives have blossomed globally, with the Little Free Library movement claiming to have reached some 75,000 registered libraries in 85 countries by 2018, and other initiatives such as The Book Stop Project in the Philippines creating networks of mobile spaces for pop-up library networks in urban areas (Rhodes, 2018).
Chapter 6
A2I and climate change

The United Nations (UN) General Assembly adopted universal Sustainable Development Goals (SDGs) in 2015. The 17 SDGs address all three aspects of sustainability: economic, social and environmental. The UN aims to reach the defined goals by 2030, at the latest. The SDGs are of universal relevance, i.e., nations at all levels of development are equally committed to their implementation.

The SDGs are part of UN Resolution 70/1 which sets out the Agenda for Sustainable Development for transforming the world. It highlights in particular the people, the planet, prosperity, peace and partnership. It recognises that the world is facing tremendous challenges of inequality, global environmental degradation and insecurity. It calls on nations to work toward the achievement of the goals through a revitalized global partnership based on a spirit of strengthened global solidarity aimed at leaving no one behind. It places importance on democratic governance and participation of all stakeholders and all people. Full participation of people requires empowerment, literacy and access to information.

Among the many challenges the planet is facing, climate change is truly global. Science has understood how human activity on this planet, largely drawing on fossil energy sources, is polluting the planet’s atmosphere and hence leading to a more rapid rise in global temperature than what the planet has ever experienced. For this process, it is irrelevant where the greenhouse gas emissions are produced; they all end up in the atmosphere and contribute equally to the warming process. Scientists refer to the last 70 years as the great acceleration. The world population has exploded from 3 billion in 1950 to more than 7 billion today and is expected to grow to more than 10 billion in 2050. Human production and consumption patterns are putting a severe strain on the limited natural resources of our planet. Phosphate and nitrate cycles are reaching critical levels, and drinking water and fertile soils are under stress, as are ecosystems and biodiversity. And climate change is happening already, as evidenced by the more extreme weather conditions on the planet.

It is worth noting that the effects of climate change are not equal on all continents of the planet. While it is true that climate change leads to global warming, it is necessary to understand that this is measured on an average basis. It explicitly does not mean that temperatures will be rising in linear fashion everywhere on the planet. The individual reality is defined by local weather conditions. Global warming will modify these weather conditions in dramatic ways, making local weather more erratic and more extreme. The planet will experience heavier winds and hurricanes drawing strength from the warmer ocean waters; periods of heavier rainfalls, but also longer droughts; dramatic temperature shifts in tropical zones; and potentially harder winters in temperate zones. The precise translation of global warming into local day-to-day weather conditions is still a scientific challenge, but it is becoming clear that the poorest part of the planet is likely to be hit hardest. First, this is because almost all the recent demographic growth on the planet has taken place in the less developed world, and this trend continues. India, China, Southeast Asia, Brazil and Mexico have experienced this growth, and Africa is joining in — putting us on the road to more than 10 billion men and women on the planet by 2050. This growth has occurred largely in tropical zones, where the warming will make living conditions particularly
Many people need access to information. They need the capability to understand communication and to change their individual behaviour. They clearly also need to translate their improved knowledge into their democratic right to elect leaders who will do the right thing. What the planet needs is leadership who will do the right things. What the planet needs is leaders who will do the right things.

This is where the link with information, literacy and education is crucial. Many more people need access to information. They need the capability to understand communication and to change their individual behaviour. They clearly also need to translate their improved knowledge into their democratic right to elect leaders who will do the right thing. What the planet needs is leadership who will do the right things. What the planet needs is leaders who will do the right things.

Going up large as over the rivers is politically difficult. Preventing construction in known flood areas is equally difficult. As a European environment minister once told me: investing in flood protection may help individuals but it means raising taxes. Shouing up in flooded areas in rubber boots and saying it is necessary to persuade them is not an easy task. Libraries must play a major role in addressing this problem. They must be able to check information without a filter, accessing the full spectrum of scientific knowledge. This is very important. Libraries must be able to access the full spectrum of scientific knowledge. This is very important. Libraries must be able to access the full spectrum of scientific knowledge. This is very important.

Information is available today at an unprecedented magnitude. International scientific panels such as the Intergovernmental Platform on Climate Change (IPCC) bring together qualified scientists from a wide range of sciences and a wide range of disciplines and the large housing sector needs to be made more energy-efficient, through better heating and cooling systems and better insulation.

Importantly, the known tipping points need to be avoided, because if crossed, these would dramatically accelerate climate change. A significant example is the risk of release of very large amounts of methane. Methane is a 30 times stronger greenhouse gas than CO2. Science is highlighting all these effects more and more precisely.

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languages and can bring them to interact to properly assess all consequences, not just individual silo effects. Examples of a lack of holistic analysis are plentiful. The shift toward diesel engines in cars in Europe was motivated also by fight against climate change, without consideration of the significant ambient air pollution by nitrogen emissions and fine particles. Similarly, in the shift toward renewable energy, the introduction of large dams for electricity production often fails to account for the drinking water needs of downstream populations, not to mention the problems for downstream wetlands and agriculture. Sustainable policies will need to be holistic policies. The 17 SDGs all impact each other, and only those policies that effectively consider all issues in a balanced way will eventually lead toward sustainable societies. Scientific knowledge on these interactions is growing and documented, for example in the form of the agri-food nexus, or the deeper understanding of the functioning of the planet’s many ecosystems. It is important that as many people as possible have access to these findings, in order to draw the appropriate conclusions for their personal behaviour and perhaps even more importantly, to use their right to vote for governments that will pursue sustainable policies. I remain convinced that the urgency of implementing changes for sustainability requires government regulation. The individual behavioural change of more than 7 billion people will simply take too long to maintain global warming below 2 degrees Celsius.
The past two decades have seen significant shifts in the perceived benefits and dangers of technology. These shifts reflect the complex relationship between the capabilities of today’s digital technologies, how they are regulated and controlled, and our ability to achieve SDG 16. Concerns have expanded from access, affordability and various kinds of digital divides to now include information asymmetries, net neutrality, platform dominance, data exploitation business models, algorithmic bias, privacy and security concerns, and fake news. The power of social media to inform and mobilise civil society celebrated during the “Arab Spring” is now juxtaposed against manipulation of public opinion and the “weaponisation” of the same platforms in the context of elections. For example, the Cambridge Analytica scandal1 covered extensively by mainstream media provides real insights into the business of social media “profiling.”

A tool that is also used to radicalise youth and promote violent extremism in civil society, social media has brought many to the realisation that the concentration of power in “big tech” (the major technology players, based mainly in the U.S. and China, that dominate the curation, access and control to information) merits greater attention. At the same time, rapid deployment of combinations of new technologies that mediate access to information – such as artificial intelligence, IoT (internet of things) and, of course, big data – reinforce the need to have a better-informed and engaged public capable of making technology choices that are in their best interest.

This chapter will focus on aspects of information ecosystem governance and the potential for greater civic engagement around the issues of public access to information and, in particular, Target 16.10. The recommendations focus on the role of libraries to educate, inform and engage from the community to global levels.

Inclusive knowledge societies – UNESCO

The internet was originally designed as a public good. The “openness” that allows us to create content, innovate, and access information online is under constant threat and attack from a range of forces, including but not limited to “big tech.” As Mozilla’s Internet Health Report 2019 states:
Since wars begin in the minds of men and women, it is in the minds of men and women that the defences of peace must be constructed. UNESCO Constitution

“...In 2018, the internet’s openness is as radical — and as threatening — as ever. Governments worldwide continue to restrict internet access in a multitude of ways, ranging from outright censorship to requiring payment of taxes to use social media, to shutting down or slowing down the internet to silence dissent. Powerful lobbyists are winning fights for more restrictive copyright regimes, and big tech platforms lock us in to proprietary systems.”

These realities remind us of the need to never take our rights for granted.

UNESCO is a multilateral organisation within the UN system that vigorously defends a free and open internet through international cooperation, capacity building and technical assistance to its Member States. It has been engaged with this agenda for many years, emphasising the internet’s potential within its goal of developing “inclusive knowledge societies based on freedom of expression, universal access to information and respect for cultural and linguistic diversity, and quality education for all.”

UNESCO and its sister UN organisations such as the International Telecommunications Union played a key role in the World Summit on the Information Society (WSIS, 2003 and 2005), which mapped out the implications of information technology for development, including the internet, and reinforced multi-stakeholder governance. The engagement continues through the annual WSIS forum and the regular conferences convened on access to information in the digital age.

UNESCO is committed to the construction of sustainable knowledge societies through its major programmes, including intergovernmental ones such as the UNESCO Information for All Programme (IFAP). IFAP was founded when member and partner governments decided to harness the new opportunities of the information age to create equitable societies through better access to information. In 2011, IFAP launched a code of conduct for the internet that remains relevant today.

IFAP actively promotes international reflection on the ethical, legal and societal challenges of knowledge societies. For example, UNESCO and IFAP are actively working to counter the radicalisation of young people online. The internet has been embraced by violent extremist groups, which are increasingly effective in using ICTs to promote hatred and violence, based on ethnic, religious and cultural grounds. These groups use the internet to extend their outreach, recruitment efforts, particularly among young people, by creating online communities with in-group extremist views and behaviour can be encouraged. On a more positive note, IFAP has long-standing cooperative links with IFLA to promote their common goals, including those in the area of information literacy and lifelong learning.

In 2015, UNESCO’s 195 Member States committed themselves to internet universality and four fundamental principles that can be summarised in the acronym R.O.A.M.: that the internet should be:

1. based on human Rights;
2. Open;
3. Accessible to all, and
4. nurtured by Multi-stakeholder participation.

These ROAM principles anchor the internet universality indicators (IUI), which are “intended as a voluntary research tool for stakeholders to gather evidence to assess national internet frameworks, particularly in UNESCO’s mandate areas, to increase understanding of the national internet environment, and to provide an evidence base for policymaking by governments and other stakeholders.”

The IUI are spearheaded by the IPDC – International Programme for the Development of Communication.

If one asked the average person about ROAM principles and internet universality indicators, few people would have much of an idea. The voluntary rollout of the IUI, which can even be done at the community level, will perhaps gradually change this situation. The IUI deciessively move the discussion around improving access to information for sustainable development away from its historical focus on infrastructure and remind us that we need to ask important questions such as: Who are the gatekeepers of content? How is content currently censored or controlled? In which languages is content available online? And how does access to information differ depending on who you are and where you find yourself? These questions are relevant in every country and are also important dimensions of IFAP’s work.

Walled gardens on slippery slopes – registries as content police

ICANN (Internet Corporation for Assigned Names and Numbers) is a nonprofit organisation registered in California since 1998. It is responsible for coordinating the maintenance and procedures of several databases related to the namespaces and numerical spaces of the internet, ensuring the network’s stable and secure operation. Its mission as stated on icann.org is “to help ensure a stable, secure and unified global internet.” In everyday language, ICANN manages everything that comes after the dot in a web address, for example: .com, .org, .biz or .ru. These are known as TLDs or top-level domains. When a TLD does not represent a country or a territory, it is known as a generic TLD (gTLD). TLDs are managed by registries.

Some have historically played a major role in the technical health of the internet. 35 years ago, seven TLDs were created by the U.S. National Science Foundation, including .com, .org and .net. In 2012, after close to a decade of policy discussions and consensus-building within the ICANN multi-stakeholder decision-making framework, applications for new gTLDs were taken. Examples of new TLDs applied for and delegated include .africa,” “babylon” and “.bible.” The stated objective of the exercise was to enhance competition, consumer choice and innovation and to expand the generic top-level domain name system into languages beyond English, including Chinese, Cyrillic and Arabic.

Despite the preparatory work, the implementation of the new gTLDs has been a disappointment. Many companies and well-established organisations are perceived to have an unfair advantage in applying for and managing particular gTLDs. Some have created “walled gardens” by introducing rules and restrictions that limit access to the second-level domain names by business and even ideological rivals.

Perhaps of equal if not greater concern, the delegation of new...
The ‘Public Interest Commitments’ impermissibly invite regulation of internet speech and content

“The so-called mandatory and voluntary ‘Public Interest Commitments’ are a set of requirements that were added to registry agreements for the new top-level domains. They were created and imposed by ICANN staff without community input. They purport to impose a general obligation on registries and registrars to regulate, according to the contents of websites and internet applications to prevent ‘copyright infringement,’ ‘deceptive practices,’ or other ‘activity contrary to applicable law,’ and to ‘provide’ consequences for such activities including suspension of the domain name. ICANN’s own, in effect, reprogram the domain name system from a global system of universal access for information resources to a global regulator of speech in which internet users around the world must conform. They are utterly inappropriate for this purpose and in the context of an internet that is supposed to be free and open and merit much research and analysis.”

Conclusion

The internet is central to our ability to access information. An estimated 4.5 billion internet users regularly access the internet to communicate and compete, using their mobile phones. The number of internet users is rising rapidly with some estimates indicating that more than 1 billion people come online for the first time each day. Many countries rely on internet information literacy resources, and so users have few tools to make safe and informed choices about how they access information online. They learn by doing, they learn from their peers, their children and sometimes they learn from predators. The 2017 Development and Access to Information report11 highlights the potential for libraries to make a difference by cultivating capabilities. It is the task of librarians to understand the implications of the technology choices they make.

When the U.S. government passed the CLOUD act, which gives it access to data stored abroad, not many people in my neighbourhood took any notice at all. Even in relatively sophisticated “old” internet markets, it took time for people to understand how Cambridge Analytica used profiling to distort elections. There was no precedent, nothing in their experience that they could use to explain it. For some, the most basic tool of language is enough to persuade them to tune out. Algorithmic bias has been shown to work against justice for those who rely on profiling certain races as inherently immoral or dangerous.12 Those criminals who promote violent extremism online know that many of the vulnerable young people they target have no understanding of how they are being manipulated. They are real, not virtual, threats to the achievement of SDG 16. Changes to ICANN’s role have had implications on the potential for increased online regulation of the internet at a supranational level whilst accommodating overlapping and competing national legal jurisdictions. There are a number of such issues that require broader international engagement. The repeated discussions to become mainstream to move outside the Internet Governance Forum, and the EC’s own notice and comment procedures for theorious have shown to work against justice for those who promote violent extremism online.

An excerpt from a real anti-observance (voluntary commitments) includes the following clause: a

A registry operator reserves the right, at its sole discretion, and at any time, to deny, suspend, cancel or transfer any registration or transaction, or place any domain name(s) on registry lock, hold or similar status as it deems necessary for any of the following reasons:

A. to protect the integrity and stability of the registry;
B. to comply with any applicable laws, government rules or requirements, requests of law enforcement, or any dispute resolution process;
C. to comply with the terms of this Registry Agreement and the ICANN master agreement;
D. if a domain name is in violation of the mandatory elements of the Public Interest Commitments, as those commitments and the changes to .org rules put it: “The mandatory elements of the Public Interest Commitments are already being used to justify registry-imposed censorship of internet content in the new gTLDs. They are utterly inappropriate for

1. See https://www.un.org/sustainabledevelopment/
2. Taken from the Donuts Inc. Acceptable Use and Anti-Abuse Policy: https://donuts.domains/about/policies/acceptable-use/. Such rules are, for instance, binding on the registrant and/or the representative of the registrant(s) including by limiting or prohibiting certain website content or services, or both.
4. Quotation received by e-mail
8. See https://www.un.org/sustainabledevelopment/
9. See the UN’s “Global South” for a discussion of the implications on the potential for increased online regulation of the internet at a supranational level whilst accommodating overlapping and competing national legal jurisdictions.
11. See ICANNWiki: https://icannwiki.org
Conclusion

In line with the focus on the interconnectedness of policy actions under the Sustainable Development Goals (SDGs), access to information is both a target in itself and a means of achieving other targets. The Development and Access to Information report therefore focuses both on measuring progress toward meaningful access to information and showing the benefits it can bring.

This – the 2019 edition of the report – allows for a first look at different countries’ and regions’ performance over time in the four key areas identified in the 2017 edition: physical connectivity, skills, social and cultural norms, and legal environment.

It highlights internet connectivity as having been an area of strong performance globally, with a number of countries making major strides toward affordable internet access. Nonetheless, there remains strong variation both within and across regions. We remain far from a world where everyone has the ability to get online at a price they can afford.

More worryingly, inequalities that exist offline also appear online. For example, the internet gender gap – the difference between the share of men and the share of women getting online – has widened. There is also a mixed picture on skills, where growing overall numbers of people with post-secondary education mask differences between countries. The picture is gloomier as concerns the legal environment, with more and more countries classified as unfree or only partially free.

Overall, while there are reasons to be positive, it is clear that meaningful access to information is far from a reality for all, in all of its dimensions. When one group enjoys more meaningful access than another, or when it is restricted for all through the actions of government or private actors, access to information cannot contribute fully to sustainable development.

Chapter 2 stresses how libraries can play a positive role. It underlines that the work of libraries is itself dependent on connectivity and fundamental freedoms, but can also support them, creating a virtuous circle. Furthermore, libraries are key partners for governments in efforts to promote equality, employment and skills. As the chapter points out, a single library activity can indeed contribute to a number of different policy goals, underlining the role of these institutions as development accelerators.

The five thematic chapters reinforce these messages. Chapters 4 (SDG 8 – decent work and growth) and 6 (SDG 13 – climate action) provide evidence of how access to information can be key for the success of policy efforts in favour of employment, financial inclusion, and the fight against climate change.

At the local level, access is a key means of ensuring people can take advantage of available opportunities to learn and earn, as well as adopting more environmentally friendly behaviour. But it also matters globally, for example for the researchers working to monitor and develop responses to climate change, as well as for the policy-makers who make decisions on the basis of their work.
Throughout these chapters, the potential of libraries is clear. They are places where access to information can become a reality for all, regardless of background, gender, resources or other factors. They can provide the support people need to develop skills and realise opportunities.

Chapter 3 (SDG 4 – Quality Education) not only stresses the value of access to information as a means of making the link between people and opportunities, but also makes the point that for access to be effective, we need to go beyond thinking only about connectivity. It underlines the need for more sophisticated skills if people are to take advantage of digital information. Counterintuitively perhaps, these are often best provided through in-person teaching and support.

Chapters 5 (SDG 10 – Reducing Inequalities) and 7 (SDG 16 – Peace, Justice and Strong Institutions) explore the need to pay attention to the way information itself is provided. They note that for access to be a tool for equitable progress, the way information is gathered and presented matters. If care is not taken, information risks reinforcing the power of one group over another, or being distorted through the actions of commercial or state actors. Where this happens, the power of access to information is weakened or nullified.

Throughout these chapters, the potential of libraries is clear. They are places where access to information can become a reality for all, regardless of background, gender, resources or other factors. They can provide the support people need to develop skills and realise opportunities. As public-focused institutions with a unique expertise in dealing with information (and a growing awareness of the impacts of their decisions), they can also help to counter the risks of distortion or discrimination. As such, they help ensure that access to information realises its potential as a development accelerator.

A third implication is the need to continue to focus on meaningful indicators at the UN level. Disaggregation by gender and socioeconomic status is already on the agenda but still far from complete. Meanwhile, measurement of those SDG targets that mention access is less than satisfactory. With access to information playing such a core role in the effectiveness of other policy initiatives, this is a significant gap that deserves to be filled.

A fourth implication – and one already being addressed independently by the United Nations Secretary General’s High-Level Panel on Digital Cooperation – is the need to reflect on how information itself is governed. The type of information available, how it is shared, and with whom, has major impacts on real-world situations.

The final implication is the need to consider the potential of libraries as a key means of delivering access to information. As a pre-existing, familiar infrastructure, with an expertise in managing and giving access, they are logical partners, from the local to the global level, in supporting global development efforts.
Karl Falkenberg

Karl Falkenberg has 40 years of experience of international negotiations for the European Union. His career started with textile trade negotiations, and he has spent most of this time on multilateral negotiations, including the negotiation of the institutional agreement setting up the World Trade Organisation.

He also negotiated a large number of bilateral free trade agreements, before moving to become Director General of the EU’s Directorate General for Environment. In this position, he negotiated on issues such as Climate Change, Biodiversity, a range of international environmental conventions and the Sustainable Development Goals (SDGs) in the UN system.

Since July 2017 he has worked as an independent lecturer and advisor on trade, environment and sustainability.

Michelle Fellows

Michelle is a research scientist in the Technology & Social Change (TASCHA) Group at the University of Washington (UW) Information School. She uses mixed-methods research and evaluation to answer questions related to access to information, skill development, and program outcomes.

Much of her work centres on how public libraries support community well-being and promote development. She also has a keen interest in literacies (information, web, digital, data). Michelle holds degrees in Public Administration (MPA) and Library and Information Science (MLIS) from the University of Washington.

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Maria is a Principal Research Scientist at the Technology & Social Change Group of the University of Washington’s Information School. Experienced in conducting multi-country studies that span diverse geographic regions, much of her research focuses on the appropriation of information and communication technologies (ICTs) to catalyse social change, specifically in communities facing social, political, and economic challenges.

Keenly interested in the role of ICTs in social movements, youth employability, and skill development, Maria has worked closely with civil society organizations, NGOs, public libraries, and development funders to conduct participatory research that results in actionable recommendations for policy and practice.

Maria is currently leading a multi-year research effort focusing on the role of access to information in advancing the Sustainable Development Goals (SDGs). She holds a Ph.D. in Communications from the University of Washington and a Masters in International Relations from the University of Chicago.

Dorothy Gordon

Dorothy Gordon is Chair of the Inter-governmental Council of UNESCO’s Information for all Programme and a Board Member of UNESCO IITE – Institute for Information Technology in Education. She was the founding Director-General of the Ghana-India Kofi Annan Centre of Excellence in ICT, a specialist technology training and research institute, a position which she held for over a decade. She works globally as a policy advisor, evaluator, project manager and organisational management consultant.

Over the course of her 30-year career in international development and technology she has held management positions with the UN and global management consulting firms on four continents; involving oversight responsibilities for multi-million dollar projects and programmes.

She is a member of ICANN’s Non-Commercial Stakeholder Group. As a strong advocate of the importance of building robust local innovation ecosystems based on open source technologies, she serves on the board and as a mentor to a number of start-ups and women in tech NGOs. She holds degrees from the University of Ghana and the University of Sussex, Institute of Development Studies where she trained as a development economist. She works in both English and French.

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Stefania has been working closely with the role of information and communication technologies (ICT) for development, mainly with awareness-raising activities on ICT for achieving and measuring the Sustainable Development Goals (SDGs).

She holds a master’s degree in Political Science from the University of São Paulo, Brazil, and a bachelor’s in the same field from the University of Entre Ríos, Argentina.

Gerald Leitner

Gerald Leitner took on the role of IFLA Secretary General in June 2016. He is responsible for the strategic and operational direction and financial management of IFLA.

In 2017, Gerald Leitner initiated the IFLA Global Vision project, with a view to building a stronger and more united library field globally, better able to promote literate, informed and participatory societies. In this context, he has led an ambitious global conversation, involving libraries in 190 United Nations Member States, alongside launching new projects such as the Library Map of the World, and overseeing an expansion in IFLA’s engagement with libraries globally.
Gerald Leitner has worked in senior positions at international organisations and in Austria’s cultural, scientific and educational sectors. Prior to becoming IFLA Secretary General, he was the Secretary General of the Austrian Library Association. In this role, he oversaw fundamental reforms to the training of public librarians, organised Austria’s largest literature festival, and developed new IT services for libraries. He engaged closely with government, ensuring the place of libraries on the political agenda.

He is a past president of the European Bureau of Library Information and Documentation Associations (EBLIDA) and a member of national and international advisory bodies in cultural, education and scientific sectors. He is highly experienced in negotiating with politicians, authorities, lobby groups, publishers, artists, businesses and strategic partners. In 2017, he was awarded the Austrian Cross of Honour for Science and Art.

Gerald studied literature and history at the University of Vienna, and after his studies worked as journalist, chief editor of the Austrian Library magazine and head of training for public librarians in Austria.

Bree Norlander
Bree Norlander is a research scientist in the Technology & Social Change (TASCHA) Group at the University of Washington (UW) Information School. She received her M.L.I.S. from the UW School specializing in Data Science and Data Curation.

Her Capstone project focused on gathering and analysing data about Open Access journals, which she and her collaborators continue to maintain at FlourishOA.org. She also works as a project manager for the UW iSchool’s Open Data Literacy program. Her research focuses on curating Open Data and analysing Open Data in new and creative ways to advance and expand scientific scholarship.

Dr Katarina Popovic
Dr Katarina Popovic is Secretary General of ICAE (International Council for Adult Education) and Professor at the Department for Andragogy, Faculty of Philosophy, University of Belgrade, visiting professor at several other universities, and President of the Serbian Adult Education Society.

She is the member of International Adult and Continuing Education Hall of Fame, editor in chief of the journal “Andragogical studies” and author of numerous publications; she was the vice president of EAEA for several years, and coordinator of German DVV international for South-East Europe, running numerous projects in the field of education, in various roles – as policy advisor, evaluator, curriculum developer and trainer.

Her field of specialisation is education and training of trainers and teachers – she is a certified trainer in youth and adult education (Switzerland), author of the first Global Curriculum for Training of Adult Teachers, with hundreds of training sessions delivered worldwide for teachers in youth and adult education, and numerous publications about lifelong learning and adult education.

As Secretary General of ICAE she monitors and supports implementation of the global agendas, especially the SDGs and Education 2030. She is co-chair of the Academia and Education Stakeholder Group in the UN DESA system, member of the Steering Group of the HLPF Coordination Mechanism and member of the Global Alliance for Literacy.

Professor Tim Unwin
Professor Tim Unwin is Emeritus Professor of Geography (since 2011) and Chairholder of the UNESCO Chair in ICT4D (since 2007) at Royal Holloway, University of London, and Honorary Professor at Lanzhou University in China. He was Secretary General of the Commonwealth Telecommunications Organisation (CTO) from 2011-2015, and was Chair of the Commonwealth Scholarship Commission from 2009-2014.

He serves on the UK Department for International Development’s Digital Advisory Panel, and the UN University – Computing and Society International Advisory Board. In 2018-19 he led the co-ordination of 21 UN agencies on behalf of UNESCO and UNICEF to develop a system-wide strategy on the future of education and learning for the UN’s High Level Committee on Programmes.

His influential edited book Information and Communication Technologies for Development, was published by Cambridge University Press in 2009, and his latest book Reclaiming ICT4D was published by Oxford University Press in 2017. Most of his research and writing currently focuses on the inequalities caused by ICTs and what needs to be done to ensure that the poorest and most marginalised people can benefit from them.

He is a member of the £20m UKRI GCRF South-South Migration Hub (2019-23) undertaking research on the use of digital technologies by migrants, Co-Founder of TEQtogether (an initiative to change men’s attitudes and behaviours towards women and technology), and is also well-known for his research on the history and geography of wine. He was appointed a Companion of the Most Distinguished Order of St. Michael and St George (CMG) in the Queen’s 90th Birthday Honours list in 2016 for his services to the Commonwealth.

Stephen Wyber
Stephen Wyber is Manager, Policy and Advocacy at the International Federation of Library Associations and Institutions, where he leads on efforts to build understanding of the role of libraries and influence policy-making.

Before joining IFLA in 2016, he worked at the British Embassy in Paris, and the United Kingdom Permanent Delegation to the Organisation for Economic Cooperation and Development (OECD). He has a degree in European Politics from the University of Wales, Aberystwyth, and a Masters from the College of Europe.
Chapter 5
Inequalities: libraries and knowledge sharing

• Material retrieved in January 2019


• Fig. 1. Afghan refugee children in Pakistan: among the poorest and most marginalised (Source: Author, 2016).

• Fig. 2. TS Central State Library observes 2509 CH The Hague

• Fig. 3. Telecentre in Bario, Sarawak, Malaysia

• Fig. 4. Micro-library in Ponta Delgada, São Miguel, Azores, Portugal (Source: Author, 2018)

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